Home-modification:
A Search for the American Home Amid a Structure of Conventionality

by
Jennifer Lynn Mecca
B.Arch., Cornell University
Ithaca, New York
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Signature of the author _____
Jennifer Lynn Mecca, Department of Architecture
May 7, 1993

Certified by _____
Roy Strickland
Associate Professor of Architecture
Thesis Supervisor

Accepted by _____
Julian Beinart
Chairman, Departmental Committee for Graduate Students

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ABSTRACT

Since its origin in the postwar period the image and spatial structure surrounding the suburban house has perpetuated a singular notion of what house and family are. This postwar concept of what the average family and house are do not correspond to the multiple social groupings and life-styles prevalent today. As it is currently produced, the suburban house is intended in form, program and policy for a single-family structure, and any attempt to alter these aspects produces a disjuncture between the structure and the household it must support. While some, such as Dolores Hayden, have suggested alternative housing designs for those families that do not match the postwar notion of the average family, these families remain marginalized by the form, policy, and space afforded them in available housing.

Given the multiplicity of household organizations present today, several examples of domestic architecture provide insight into potential spatial characteristics that allow flexibility in response to alterations in the constructs surrounding family organization and use. In formulating a new sense of spatial organization, qualities of place extracted from existing models provide an understanding of the spatial characteristics necessary to make the house function as a place for both collective activity and private, individual habitation. Aspects of these precedents -- contextual relationships, transition space, threshold, and access -- serve to support necessary distinctions between public and private realms of the house, while simultaneously allowing for the flexibility necessary to accommodate changing social structures. The implementation of a new structure for the suburban house that is based in a spatial rather than programmatic distinction of place is intrinsic to the meaning of the house in its current social context. Such a framework for thinking about the house can provide a basis for a lasting structure in the suburbs, while allowing for alterations in the specific aspects required of the dwelling that will inevitably change with the passage of time.

In response to the need for a change in the nature of the suburban house, a series of diagrams are proposed as a means of reconciling the discrepancies found between the suburban house and the current exigencies of American families. Through the application of a series of spatial arrangements derived from existing models, these diagrams are intended as an operative framework for rethinking the design of the suburban house. By employing the spatial characteristics found in the precedents and overlaying needs, family structures, and use patterns, the diagrams are able to provide a flexible structure for the suburban house -- one that is able to turn the house, an object of repetitive production, into a home that can accommodate a multiplicity of households.

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Title: Associate Professor of Architecture


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CONTENTS:

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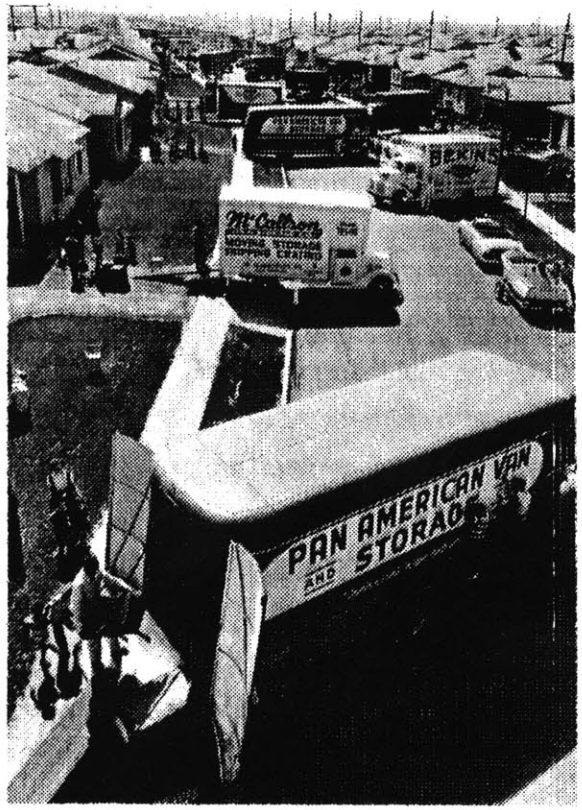
"When a problem is properly stated in our epoch, it inevitably finds its solution. The problem of the house has not been stated."
- Le Corbusier, Towards A New Architecture.

Chapter 1
Home-modification: A Search For the American Home



Chapter 1:
A Search for the American Home

The desire for a single-family detached house is a deeply embedded part of the American dream that has become increasingly problematic to attain. Despite its inherent democratic idealism, the current suburban model is exclusive in terms of the familial or social composition which it favors in its form and spatial organization. Preconceptions about the suburbs and policies which regulate their development serve to reinforce an homogeneity of place. In marketing a singular image of the home, the suburban model has lost sight of what current life-styles led require the house as a place. Often the home for households not considered the norm is relegated to communal and urban housing situations which are in direct conflict with the suburban ideal of space and ownership. While existing suburban houses can be modified to accommodate these diverse life-styles through additions to the basic building and changes to furnishings, a personalization of the house through spatial organization can provide a more flexible structure that accounts for the current and future needs for American families.

Whether the idea or dream of home is even possible in a standardized way is itself questionable in any social context, where individuals and groups have distinct notions of what the term signifies. Given that "modernization is the process by which capitalism uproots and makes mobile that which is grounded . . . and makes exchangeable that which is singular " [1] the idea of the detached house in an individualized sense, as a place to anchor oneself, hardly seems plausible when placed in a context of a market-based, homogeneous manner of producing houses. Acknowledging the transitory state of social structures, where things "grounded," such as conceptions of family, place, and use, are no longer consistent or stable, no single place called home is practicable. Perhaps, then, it is that home, or a sense of rootedness, must occur across a multiplicity of places, and must take on an altogether new form in the culture and in its collective attitude concerning the place.

In reconfiguring the suburban house so that it may accommodate this diversity, a basis for its formal structure must be grounded in spatial definitions of public and private realms within the house, and not in programmatic attitudes as is the current model. Past organizations of the spaces within the house, based in distinctions of public and private space, can serve as a basis for building a spatial vocabulary intrinsic to the definition of a home within the structure of a house. By

establishing the suburban house as a place defined by spatial qualities and expectations of privacy, a flexible structure for the place can be determined which may be altered to meet current and future shifts in family structure and activities placed in it.

Home-modification: The Home in the Marketplace

Since its origins at Levittown, the suburb has been grounded in an American notion of place -- one of an affinity with the landscape, and the sense of possession of it. "Home-ownership has long been associated with the 'each farmer on his own farm' sort of territoriality;" [2] thus the detached house was the model from the beginning. As Americans shunned urban life as the breeding ground of society's ills, the most valued dwelling has remained the freestanding object in an idyllic setting. Now mass produced, this ideal has been distilled to the suburban house.

The suburban version of the detached house and its interpretation of place was, however, created at a specific point in history for a specific social structure. What was once considered to be a typical composition of the American family, based in a singular notion of life-style and place, is no longer consistent enough to be used as the basis for the standardized dwelling. Consequently, a recognition of who the house is for -- in its physical structure and spatial arrangements -- is required.

While the term house signifies a physical structure, universally understood, the term home generally takes on a connotation of not only the physical characteristics, but also associated personal meanings and definitions. House, as an object, is static -- a tangible commodity; home, on the other hand, is active in its definition, implying the personalized associations and the assigning of uses that lend individualization to the object. Conflict has arisen as the active, multifarious notion of place has been made into a singular static commodity marketed to a diverse group. The repetitive suburban environment presupposes a single pattern of family and activity, and repeats it in all situations. The single-family image upon which the notion of the suburban home has been based, that of a two-parent, two-child middle-class unit, and the architectural expression of house in which this typical family lives has also acquired a standard set of characteristics in the marketplace.

Production of the American suburban house as a singular object is actually, then, the result of a firmly established code of conventions that guide all facets of its form, and is not a socially detached, individual act. These conventions are evident in the spatial configuration, the size of rooms, placement of objects, the style or decoration imposed, and the use and

meanings attached to certain pieces, objects and spaces of the house. Taken as an independent entity, the American suburban house itself has become a convention within the society.

The image of the house in its cultural context is also a significant issue, as the house itself has been made into a consumer item within the realm of mass production. What is referred to in this study as home-modification, or the commodification of the image of the house in popular culture, is a prevalent occurrence in the American forum. The notion of individual choice in life-style, or the distinct quality of the "home as one's castle" is lost when the house itself, and its design, become a commodity -- when "one builds in a certain way because one has become used to it;" [3] Likewise, the image of home -- or the dominant societal conception of what a house should look like -- is reinforced in the marketplace by advertising, the media, and other places whose functions are related to living: in places such as grocery stores, the travel industry, and department store displays. The transference of the image of the house to other spaces and objects within society perpetuates the extant set of conventions surrounding what the house is, what meaning of home is, and what the group for whom it is intended consists of.

One can readily make a space more personal by changing the paper and paint coverings as opposed to the effort and cost of restructuring the given space, perhaps in its initial planning, the place is made could provide enough flexibility to allow for a variety of attitudes toward dwelling to occur. The interior configuration of the house could likewise more readily lend itself to the assimilation of new forms, ideas and life-styles. Perhaps home is a place where "objects of an art without style . . . become the style of the person using them in the way in which he uses them." [4] Given this notion, the basic spatial structure necessary to define home must be derived. As with the social constructs surrounding the place, it is possible that some spaces and arrangements have also lost their original significance amid changes in use and intent. The physical structure, then, need not fulfill the conception of a certain type of place, but merely provide a framework based in distinctions of public and private realms, open to interpretation by the users according to the associations they bring.

Modifying the Basis for House and Home

While many architects foresee the existence of new images of the house, attention must be paid to what the new composition of this place is in the modern world. Configurations of space from such precedents as Frank LLoyd Wright's Usonian houses and McKim, Mead, and White's Low House, provide

insight into issues of transitions from public to private space, the positions of rooms and relationships or adjacencies among them, the association of house and community, private spaces embedded within the structure, and the adaptability or flexibility of the place in accommodating diverse needs. It is these core elements or relationships the place must provide for, regardless of the users, that must be understood. From these core characteristics a spatial framework may be derived, consisting of diagrams outlining basic relationships between public private from the level of site to that of the room, the space of the individual, that can function as a basis for designing new places for the households and activities currently in existence, as well as those possible in the future.

Given that it is examples of a specific era of housing with which we are left today, the structure developed was appropriate to the needs of that time, and has not deviated much since then to keep with the pace of change within the society around it. The notion of home is not a singular entity; rather, it is a multiplicity of places, each with connotations specific to a particular person or family unit. It is possible to reconfigure the notion of the house in such a way as to reinforce the needed sense of diversity in the suburban landscape, physically and socially. A more flexible and more individually oriented conception of the house can be proposed which makes use of a series of generalized relationships between public life and the individual as its basic structure, establish a spatial framework for community and personal interaction, with and in the place of the house. It is possible to reconfigure the constructs surrounding the American detached house of the suburbs so that it may be more receptive to the variety of life-styles prevalent today, as well as to those possible in the future. By allowing for individuation amid the ideal of the singular house, the physical environment would serve to reinforce the notion of a multiplicity inherent in the culture for which it is intended.

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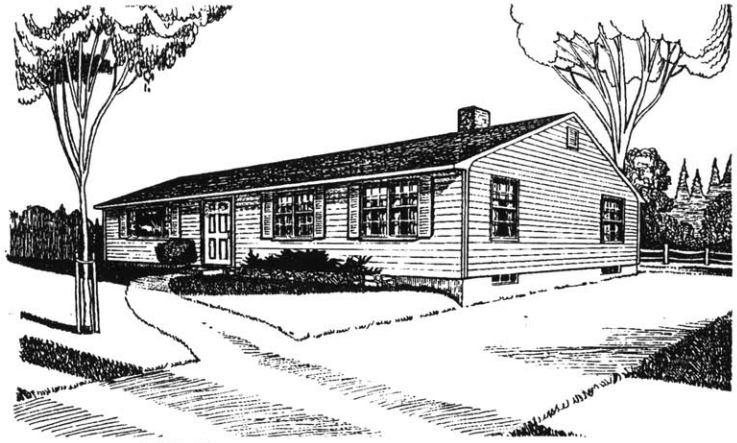
[1] Johnathan Crary, Techniques of the Observer: On Vision and Modernity in the Nineteenth Century, (Cambridge: MIT Press, 1990), p. 10.

[2] Dolores Hayden, Redesigning the American Dream: The Future of Housing, Work and Family Life, (New York: W. W. Norton and Co., 1984), p. 192.

[3] Adolf Loos, "Potempkin City," Rassegna 41 (March 1990): p. 95.

[4] Roberto Masiero, "In Praise of Decoration against Superficiality," Rassegna 41 (March 1990): p. 20.

Chapter 2
Remnants of Postwar Conventions in the Suburban House



The Eastport

A large or growing family will appreciate this house with its mud room, laundry and 4 bedrooms all on one floor. Large closets and storage problems. The living room with its picture window is an ideal center for family activities as well as a place to entertain. The clapboard siding shown is optional.

Chapter 2:

Remnants of Postwar Conventions in the Suburban House

The historical context that created the suburban house in form and spatial configuration established an obdurate set of conventions associated with the house that persist in the place today. The protracted influence of the conception of the American family as having the composition of the average postwar household has left the standardized suburban house, and the attendant image of the home, as a relic of a different era's needs and values. From its inception, then, the postwar suburban house was intended for a time bound definition of the typical family. Given the social conditions in the United States following the Second World War, almost 40 percent of the population consisted of married couples with, or expecting children. As housing shortages created a need for mass-produced houses, Levitt and others readily met this need by supplying the average family with a piece of the American dream -- the detached house and the bucolic atmosphere of the suburb. "'Suburbia'" had thus become "a cultural term, intended to connote a way of life, or, rather, the intent of those who use it is to connote a way of life." [1] The standardized image of what makes the typical house, as maintained by the building industry, television, advertising, and other media, has prolonged the dominant role of the postwar values placed on the house and home by American society.

As established by this era in history, the typical, or traditional family for which the suburban house is fabricated, is composed of a working husband, a wife who stayed at home and an average of two school-aged children. Since this portion of the population was generally composed of returning World War II veterans and their new families, most households were typically of the same age group. As a larger entity, the suburban development tried to imitate the small town organization of property and houses in form, and in the visual associations called upon as references. Despite the look of ease present in the small town, suburban residential, or R-1 zoning practices sealed the encodings of such areas by limiting the ways of occupation and types of alterations that could be made to houses. These laws include such practices as owner-occupancy restrictions, occupancy by relatives only, and, as stated in Brookline, Massachusetts, "'no external evidence of occupancy by more than one family.'" [2] Such legal means have restricted the inclusion of additional apartments, and other expansion spaces from the fabric of the suburban environment. Often times, by the

size of the houses and lots, these subdivisions were also planned with a specific income range in mind for the occupants, creating both economic and racial homogeneity.

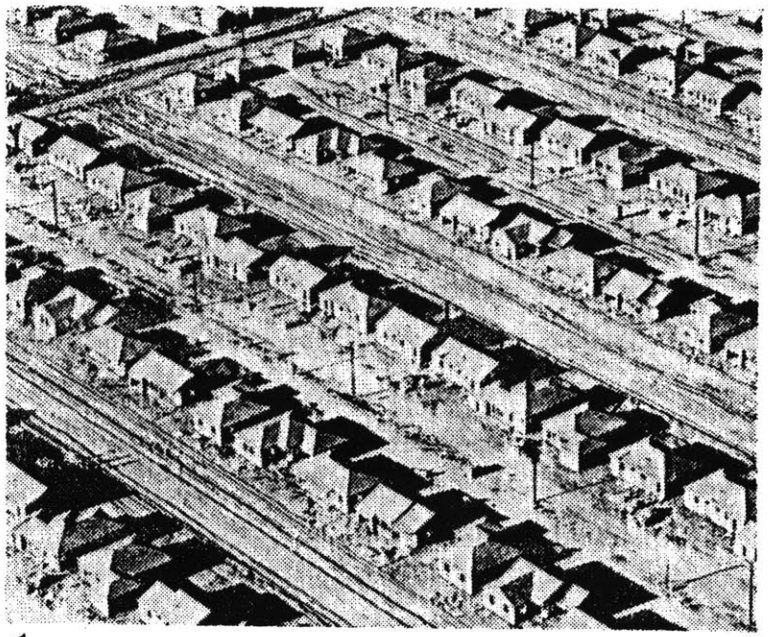
In order to provide insight into the interior and exterior implications of the postwar ideology as manifest in the house, a sample set of documentation from a suburban developer's stock set of homes has been chosen. The L. C. Andrew Company [3] presents a range of houses which exhibit many of the standard features borne of the singular social conception of the house. [Refer to Appendix A for documentation of these houses.] While the actual expression may differ among developers and designers, and styles have varied with time, the underlying organizations of the house as a place has remained consistent. An older set of documentation was chosen for the the analysis as it provides a clear understanding of the embedded conventions and standardized organizations which prevail in the suburban house.

A Look At the Postwar House as Relic

The postwar house can be seen as a relic of a time specific image of the average home: remaining fragments of a singular notion of family and use pervade throughout the object. In terms of its image, and in terms of its physical characteristics, creates a specific sense of the home as a place. In the desire to provide a contrast to an urban environment, through the creation of the single-family detached home, the ideal image that the suburb strives to replicate is that of the small town. As a place, the small town is seen as a haven for security through a sense of community, an established or historic sense of place, and a distinctive American notion of engagement with nature, or the landscape. The lot size versus the actual coverage of the house, while they do not exactly match the proportions found in the small town, try to imitate its spatial quality. In Levittown, for example, the 850 square foot house is placed on a 60 foot x 100 foot lot, complete with new vegetation. Even the names developers give to model houses often reflect a certain sensibility; usually one associated with security, establishment, or the pastoral. One company, for instance, has chosen names such as "Knox" and "Stockade" which evoke a sense of security, while some choose names and styles that connote "an old-world feel" for a sense of historic establishment. Many, in keeping with the notion of the suburb as a symbol of flight from the city, have chosen product, street and development names such as "Shadow Oaks," "Twin Pines," or "Pebble Creek" in hopes of evoking an idyllic theme as a selling point. Ironically, many such developments contain the natural elements described to the home-buyer. On the level of the home, and for whom it is

intended, prototypic families of the television --*Leave It to Beaver, Ozzie and Harriet*,[4] and mainstream movie families such as that of *Home Alone* -- are an integral part in the perpetuation of what the cultural notion of the ideal family, for which the suburban house is built, or should be built.

In terms of the physical or structural aspects of the configuration of the standard house, the pieces implemented all revolve around a single notion of and purpose for the house. The number of rooms considered necessary for a basic house, grounded in a two-parent, two-child family, is two bedrooms, a bath, kitchen, and living room. From this set of essentials, other rooms are added, such as a dining room or additional bedrooms, a workroom or a den; or combinations of spaces made, such as living and dining being incorporated in to one family room or space. This set of spaces is then packaged in a unified, box-like structure, as a singular unit. In planning the size and organization of the house itself, the structure was generally viewed as being a "starter home," and the attic and basement were accordingly conceived of as expansion space. Provision is made for storage in an attic or basement, and the automobile is also accommodated by its own space demarcated in the yard or by a garage. Inclusion of the car through a carport or garage, now standard features of any suburban house, are obvious manifestations of the complete dependency of the suburban



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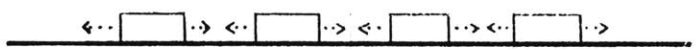

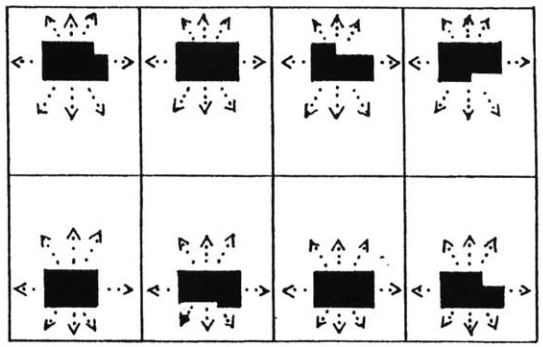

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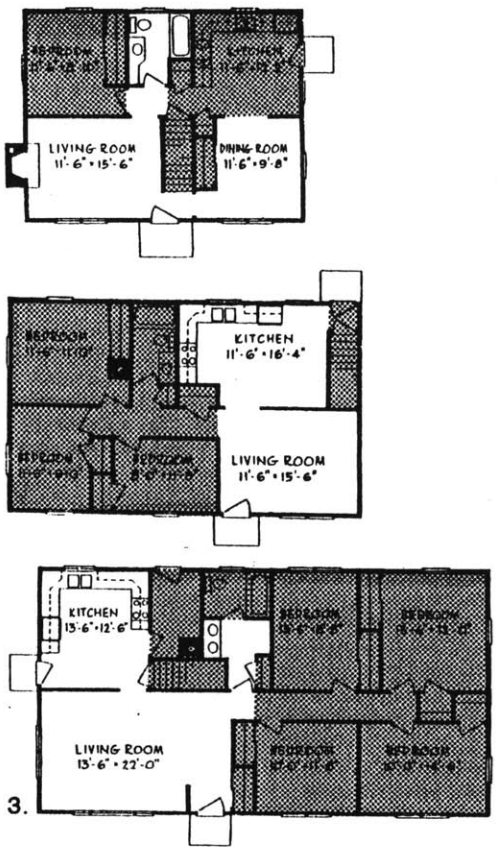


3.

1. The suburb: a context of repetition.

2. A lack of demarcation exists between public and private exterior spaces as the intervening space can be read as continuous.

3. Provision for the transition from the exterior world and to interior of the home does not exist in most suburban home designs. In a process of eliminating all but the minimal spatial structure necessary, the loss of a transition space lays the interior, and consequently more private zones open to exposure to the public realm.

household on the automobile, and its extreme importance to the operation of the community.

In its fabrication, the house has become dependent upon both conventions of construction processes, as well as preconceived notion of what elements or spatial arrangements are necessary or preferred for the ideal house. Suburbia has "the stigma of conformity, of identical houses supposedly inhabited by people of the identical mind-set and identical behavior." [5] Repetitive construction processes also resulted in the packaging of of the image as a product -- catalog items such as windows and doors dictate spatial relationships between rooms, as well as between the interior and the exterior of the house. Shutters that do not close, or are never used, and snap-in, snap-out window mullions are symptomatic of the cultural preconception of what the suburban house is.

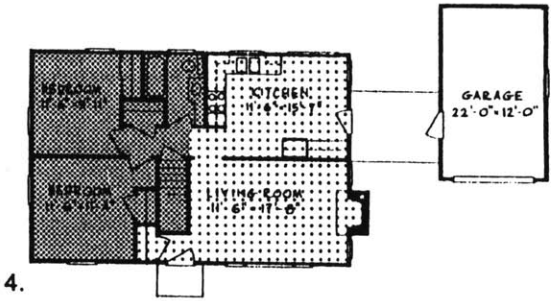
Problems With the Postwar Structure

Diversity of spaces in size, type, and intensity of activity is not present in these minimal models for the house. No space is allocated for transitions between uses and intensity level, whether it is between the exterior and the interior, or between various interior places. In the general displacement of spaces only a gross sense of zoning is evident. It is, however, merely

present as a distinction between bedrooms, as private places, and kitchen and living rooms, as public spaces. A finer grain of definition was not then deemed necessary in providing the minimal sense of home for the average family.

An investigation of the typical suburban house reveals that in its contextual relationship and internal configurations defects can be found in the relic due to its embodiment of a specific notion of family and place. Many of its predominant characteristics are at odds with the social mores which it seeks to fulfill. The limitations of the place of the suburban house in providing a diverse population with a complete sense of home can be read in its contextually based definitions of private realms, spatial arrangements, and uses associated with spaces.

Contextual Relationships In considering the issue of the individual dwelling within its context, the distinction between the public world of the suburban environment and the private place of the interior, should be integral to the distribution of spaces in the dwelling. On the contextual level, construction and mass production create an environment of identical repetitive objects. (Fig. 1.) The homogeneity of a series of similar houses lacks the distinction expected of the individual home. Here lies the contradiction. As the embodiment of the ideal of an individualized place, the relic of the suburban house, the form



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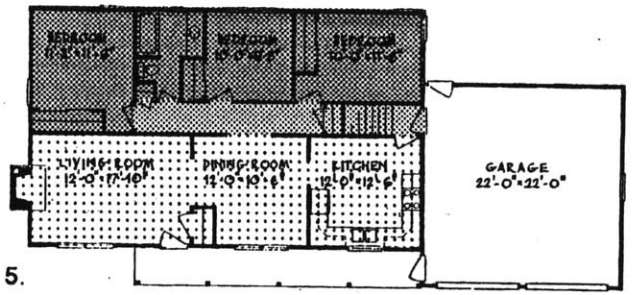

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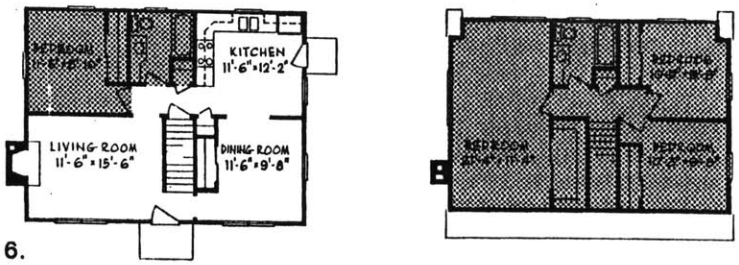


6.

4. In the first typical zoning situation, the private spaces of the home are organized in an area that is farthest from the garage.

5. The second typical configuration arranges the transition from public to private spaces in a series of bands that are parallel to the road.

6. Sectional organization is the second means of distinguishing between the public and private spaces of the house. In this case, the rule is not adhered to as a few private functions slip to the ground floor.

and expression evident in the suburban home, are highly repetitive and homogenized as a place, and not the singular piece that one might expect.

Public and Private Realms Privacy thus loses its association with personalization and the distinctive individual place due to the repetition found in the suburb. In terms of the perception of the house on its lot, there is no distinction between private exterior spaces. Front yard and back yard are loosely defined, and usually no visible distinction can be made. (Fig. 2.) Fences and shrubbery, however, define what is one's territory, the piece over which the individual is proprietor, from that which is his and her neighbors' yards.

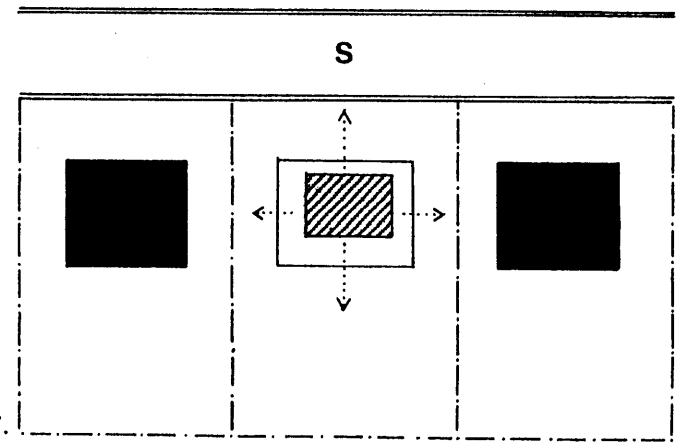
The demarcation between the public and the private realms in the suburban dwelling are equally ambiguous as one moves into the structure of the house itself. The front door, which in small town or the urban dwelling has a rich sequence of public and semi-public spaces attached to it to bridge the gap between the two worlds, here exists as a vestigial piece. Only occasionally, can a small porch be found on the exterior to make the transition; meanwhile the front door opens directly into one of the living spaces. In many suburban homes, the front entry lacks practical aspects such as ways to accommodate wet clothing and shoes before entering the carpeted house. (Fig. 3.) Suburban dependence on the automobile accounts for this shift, as most people enter through either the garage or a side door which is close to the drive -- the family entrance, where shoes and coats are deposited.

Moving deeper into the interior of the house, various adjacencies of rooms to each other, to the entry sequence, and to the perceived public and private exterior realms, are significant in constructing find a sense of logic in the orientation of rooms in the house toward exterior spaces. (Figs. 4-7.) Often-times bedrooms, the most private spaces, front the street,leaving them either with small clerestory windows, or at the mercy of curtains and shades for privacy.

The only place for individual retreat, or personalization of a specific space, provided by the suburban house is that of the bedroom. (Fig. 8.) Work-space, study space and play space all occur here. There is no occasion dedicated to quiet individual activity within the larger context of a semi-public room. By contrast, in Victorian houses, large multi-generational dwellings of the turn of the century, such semi-private spaces existed where, for instance, children could study individually while under partial supervision and in contact with concurrent family activities. Such activities then become an integral part of the operation of the family.

Flexibility of Spatial Arrangement Placed in a box-like envelope, the interior configuration of the suburban house create an inflexible diagram with which to work when attempting to adapt to any deviation from the postwar model family. Any incorporation or addition of new spaces to the initial structure are visibly not of the original structure of the house; they are ancillary and not integral to either the outward form, or the interior spatial configuration. (Fig. 9.) Aside from the attic expansion space planned into the design for additional children, space for significantly larger families, for relatives and extended family members, for elderly, for rental units, or for house guests, all take on an awkward relationship to the basic structure. (Fig. 10.)

Even the conventions with which the representation of the house is drawn reinforce the notions of public/ private definition within the house and its context. The garage, the place for car, which symbolizes the connection with the community, is segregated in the representation from the zone of the house interior. It, however, is also distinguished from the space of the driveway which exists in the public realm of the front yard. (Fig. 11.) The space of the porch, for example, through the lack of a sidewalk and the conventions used in representing its column structure, is demarcated as having associations with the interior of the house, but not with the outer community. It is a



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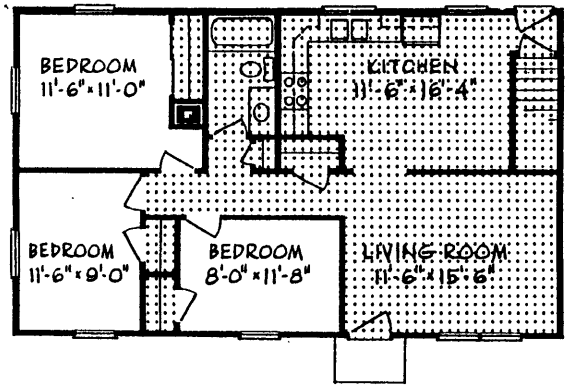
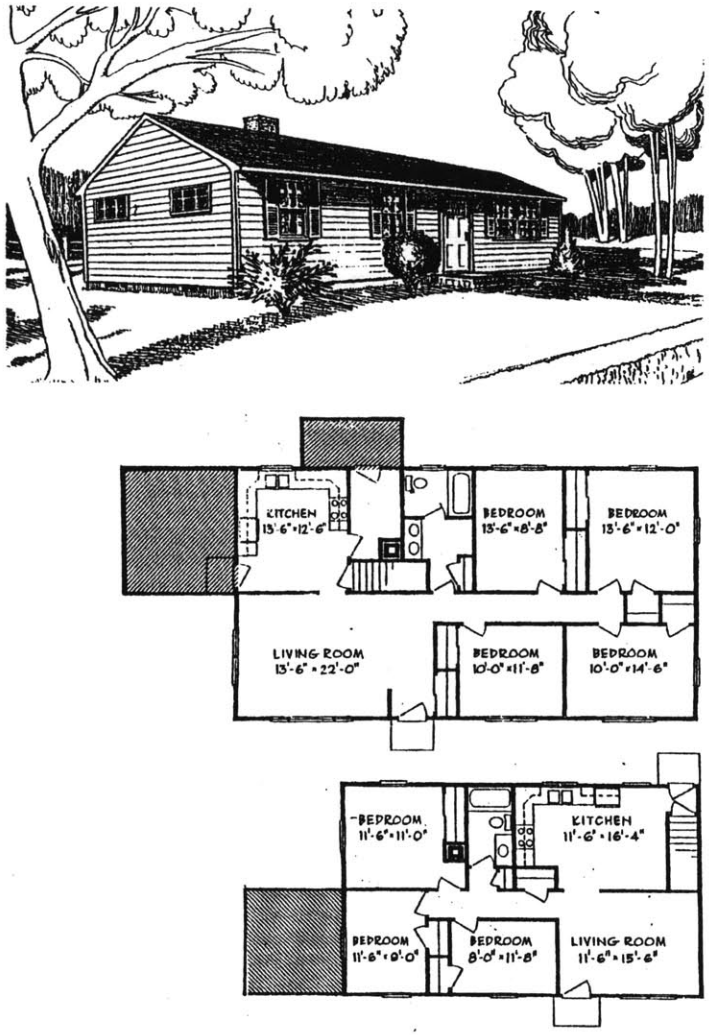


8.

7. Given the spatial arrangement of the suburban context, it is possible that there might be more of a perimeter to core distinction between public and private realms of the house.

8. In the average suburban tract home, no space for private, or semi-private retreat exists, other than the bedroom. This situation forces other areas of the house to take alternative functions, such as study space for children.



9. Attempts to increase the size of the home by creating additional rooms appear ostensibly unrelated to the original form and configuartion of the structure.

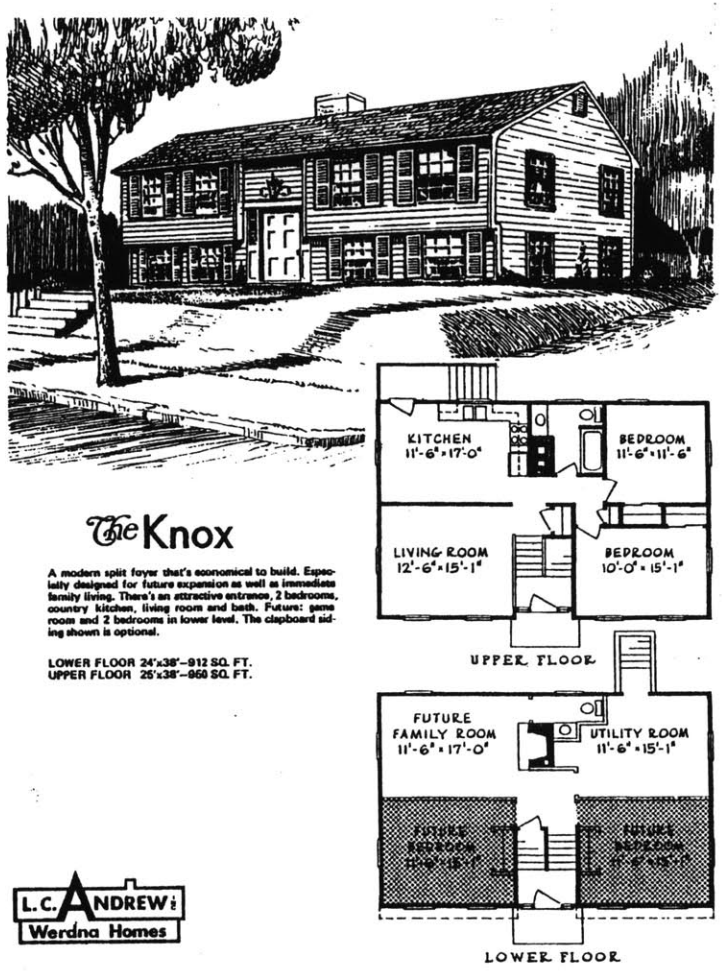
space for activities of the interior to occur outdoors, and not a site for communication as in the traditional American town.

Activities Intended for the House Integral to the issue of zones of privacy in the typical suburban dwelling, is the distribution of uses and activities within the space of the home. In the house as it is currently constructed, no work or activity space, other than that for the activities associated with the work of the home, are intentionally provided for. When places for alternate activities are added, such as office space in the home and designated child-care space, the relationship of the new function to the living areas is an unsuitable mix of public and private place. For instance, in home office situations, where clients or the public may need to enter the home, the relationship of such a place to the spaces allocated to the functions of the house, should not be one in which the privacy of the home is violated, creating discomfort for client and occupant.

Family Roles The original intentions for the uses of household spaces were based upon specific notion of roles relative to the members of the average postwar family, built into the spatial arrangement of the house, these gender and age encoding persist in the structure today. (Figs.12-14.) Biases are built into the arrangement of the house relative to the location, orientation,

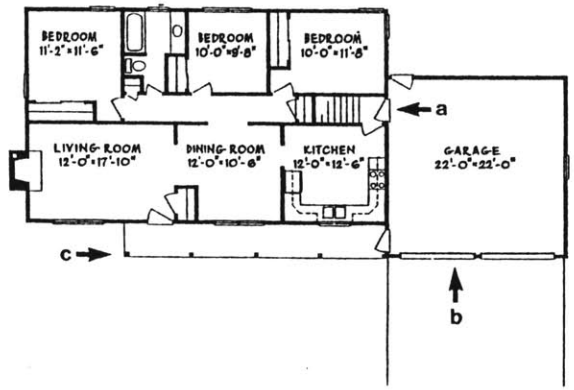
and relative placement and internal arrangement of programmed spaces such as kitchens, workrooms, and recreation areas. Distinct spaces are relegated to uses for men and women -- particularly the kitchen, initially assigned to the housewife and planned as an isolated space in the house and as a one-person operation. As an integral part of the activity of the house, it remains segregated in its relationship to other spaces, despite later attempts at open plan. The informalization of the cooking/ eating processes of the house have served little in the attempt to remove a person from the role of food preparation. Instead, the casual kitchen detracts from the potential of the dining room to serve as a place for family interaction in a participatory, or ritualistic, way. The individual relegated to the task of cooking is segregated from the family at the table in most cases, as this person is observed by the group of hungry voyeurs at the dining table, yet he or she only gazes upon the instruments of cooking.[6] (Fig. 15.) Current model houses, not just those of the postwar era, still provide significant information about expected roles of various family members in their locations and decoration. Spaces, for example such as "family rooms, dens, and bonus rooms are almost uniformly furnished . . .with a masculine motif," [7] while a daughter's room is donned in pink wall paper and lace curtains, giving cues as to society's characterization of the occupants' behaviors.

10.



10. Basement and attic space is often slated as being viable room for expansion. These spaces , due to their removed location, are marginalized in many instances in their relationship to the original space of the house.

11.



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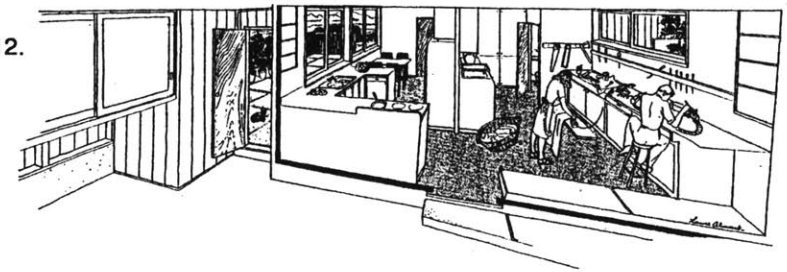


11. The conventions of drawing with which the house is represented serve to reinforce the definition between public and private created between the house and its context, and within the spaces of home.

a. The space of the garage is not represented as an integral part of the house, rather a line divides the spaces at the door.

b. The garage, through double line garage doors, is also severed from the driveway, the connection to the public realm of the street.

c. Square columns placed at the edge of the porch indicate its containment of space as a room of the house, and not as an extension of the house toward the street.

12. Little space is provided in the post-war home for any work other than the work of the home. In many cases the decoration and marketing of the spaces for such activities are gender specific.

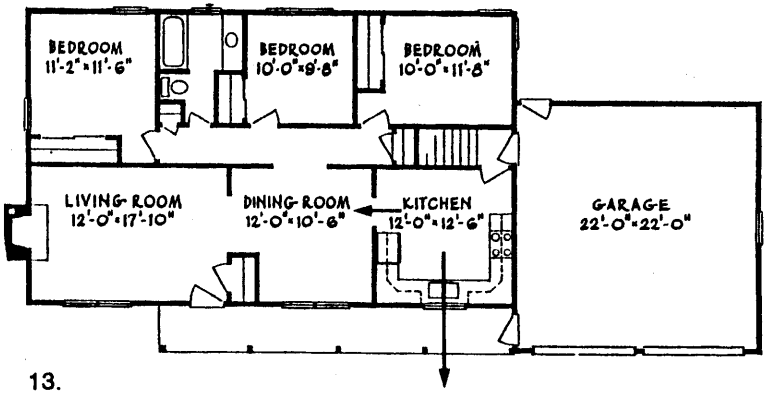
Despite the acknowledgement of children being an integral part of the new family structure, the average suburban house places little emphasis on space exclusively designed for their activities. Given the social emphasis on education as being intrinsic to the maintenance of the particular life-style promoted by suburbia, it is an irreconcilable oversight that a prominent space within the private realm of the home was not relegated to children's studies. Other uses related to child-care, such as adequate play area, are also neglected as the space given over to children's activities in these homes is typically the basement space -- damp and poorly lit. (Fig. 16.) This situation additionally exemplifies how little thought was initially given to expansion space for the house, and that the uses typically assigned to the few flexible spaces incorporated in the postwar design are often inappropriate given the qualities of them as useable places.

A definition of the potential relationship of zones, both in the outlying suburban environment, and within the interior of the house, is necessary as a means of regulating the transition of spaces between degrees of public and private realms. Such a definition would serve to clarify the potential sense of the place individual or family may have within a larger community, be it the scale of the suburban neighborhood, or the microcosm within a single house. These relationships concerning the territorial arrangements of the spaces within the house could provide

significant resolution to issues concerning the disbursement of uses and activities throughout the place.

A Misfit Between Space and Occupation

In addition to the original designed inadequacies of the postwar model in its temporal context, changes to the composition of the what may be considered the typical American family, and the way those household use their home, have left the house a relic of outmoded values. The current American family is no longer as homogeneous as it once was in composition, and the places in which they live should not be either. With this new set of life-styles comes alternative uses and activities that remain at odds with the configurations of spaces in the original model. The suburban tract house of today exists as a modified version of the original base model, and merely enhances the most non-functional attributes of this design. It is still designed and built for a particular family type and a socially defined notion of use in mind. In the evolution, for example, the fragile interface of the public outdoor space with the private interior has been damaged as the front door has disappeared and, in some cases the house has even been re-oriented on the site in order to mark the garage entry as the prominent point of access to the house. Changes to interior arrangements have



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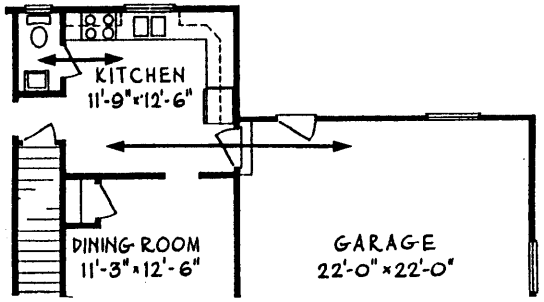
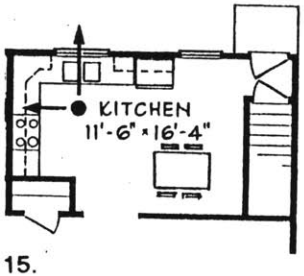


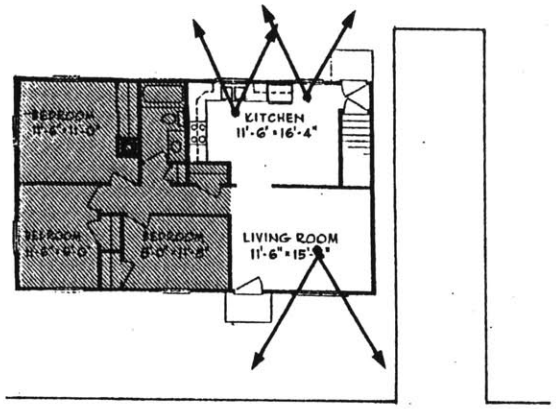
14.

13. The size of the typical kitchen space is usually only sufficient for the activity of one person. This limitation serves to reinforce post-war roles for the home, and prevents the space from becomming a place for shared activity.

14. By its association with the entry to the garage, as well as the inclusion of other spaces such as a bathroom and basement access, the space of the kitchen is relegated to the service realm, and is not a place for social interaction.



15.



16.

15. The arrangement of appliances and work space often reinforces marginalization of the person cooking by maintaining a position where his or her back is toward the family at the table while preparing a meal in an eat-in-kitchen.

16. In the typical configuration, there is not necessarily an optimal point from which to adequately supervise childrens' play areas.

also accentuated the original conventions of the postwar ideology -- the parents' room has become completely segregated from the children's spaces in the development of what is marketed as the "master suite." Surface alterations have also been made in attempts to reconcile problems in the design of the model. Porches have been added in efforts to establish a feel more akin to the small town. Many such efforts, however, remain in the realm of the cosmetic, as the house, through current patterns of community organization and household life are not compatible with new notions and uses.

The imagery often associated with the notion of suburbia is physically detrimental to the actual ability of the place to fulfill the American dream of home ownership and personal autonomy. For the diversity found in a cross-section of the population today postwar notions of the house and its functions are no longer valid. A new way of looking at the house is needed in order for the suburb to satisfy the dream of home ownership for all.

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[1] Bennett M. Berger, "The Myth of Suburbia," in The End of Innocence: A Suburban Reader, ed. Charles M. Haar, (Glenview, Illinois: Scott, Foresman and Co., 1972), p. 37.

[2] Dolores Hayden, Redesining the American Dream: The Future of Housing, Work, and Family Life, (New York: W. W. Norton and Co., 1984), p. 181.

[3] L. C. Andrew, Inc., "Designed for your comfortable living in New England," (South Windham, Maine: Werdna Homes Division, [19- -])

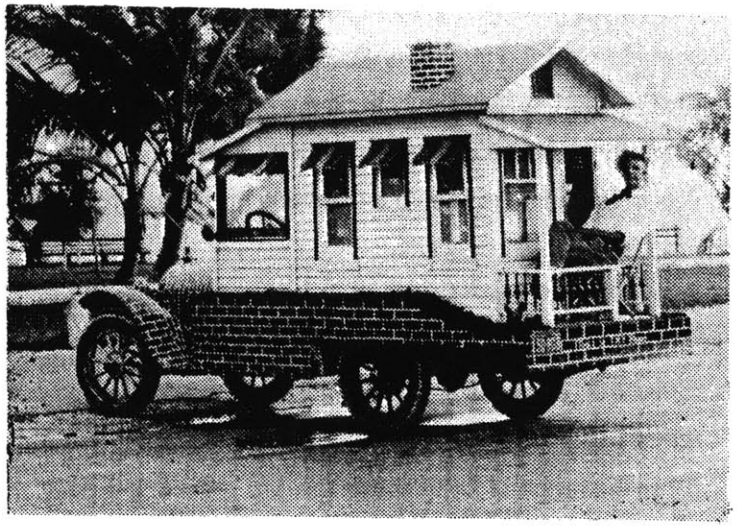
[4] Lynn Spigel, "The Suburban Home Companion: Television and the Neighborhood Ideal in Postwar America," in Sexuality and Space, ed. B. Colominia, (New York: Princeton Architectural Press, 1992).

[5] Arnold Abrams, "Product of the Times," in "Goodbye Levittown: The Early Years," Newsday (4 October 1987), p.37.

[6] John Biln, "Given Domain: Mockbee-Coker-Howorth, 'Breaking the Cycle of Poverty.'" in Assemblage: A Critical Journal of Architecture and Design Culture 16, (December 1991): p. 83. A more complete discussion of gender readings in the home, and the marginalization of family members through the spaces of the house can be found in this article.

[7] Clare Cooper Marcus, Carolyn Francis, and Collette Meunier, "Mixed Messages in Suburbia: Reading the Suburban Model Home" in Places: A Quarterly Journal of Environmental Design 4, no. 1: p. 33.

Chapter 3
The Exigencies of Current Living



Chapter 3:
The Exigencies of Current Living: New Families, New Needs

As previously discussed, the suburban house of the postwar period was based on a set of conditions that were assumed as being representative of the prevailing family composition. At this instance, the average American family was typically young and considered to be composed of a working male, a female who stayed at home, and an average of two school-aged children. This social situation has hardly remained constant, while the formal structure of the houses which we build have changed insignificantly in comparison. Today there exists a multiplicity of places and ways in which dwelling occurs; a single solution, such as the formal expression imbedded in the postwar home, is no longer possible.

The solution to the housing question currently practiced is the adaptation of existing postwar models in order to accommodate new, alternative family structures. Carried out in a manner which focuses expedient accommodation, this solution ignores the range of living space needed. While "it is easy to see how such suburban single-family houses [can] be remodeled to become duplexes and triplexes" [1] simply through the addition of rooms and the alteration of existing interior spaces, it must be understood, however that this adaptation is practiced upon models designed to accommodate the family type which constitutes only 26 percent of all households. While the house type which continues to be constructed is adaptable to current exigencies by additions and alterations to the structure, "many experiments can take place with regard to the sizes and shapes of new apartments" [2] that from the start might be conceived as being for a group other than that typically considered. An understanding of the changes that have occurred in the family structure are intrinsic to the re-design of the suburban house. Moreover consideration of family structure, a reconfiguration of the home must take into account new activities and uses now expected of the house. It must also acknowledge contextual issues such as its relationship to the community and neighborhood organization.

Several alterations in the current American life-style have contributed to the need for a reconception of the structure. The primary characteristic of this new way of living which serves as a driving force behind the need to re-design our manner of dwelling is the multiplicity of family or living unit-types that exist in a cross-section of the population. As Dolores Hayden and others have pointed out, a social change must take place at all levels,

including government, employment and cultural attitudes, in order to fully adjust the notion of housing in America to the needs of the entire population. As previously discussed, the ideal of the single-family house and the attendant desire for property ownership are inherent values in the culture. All too often the solution proposed for the non-traditional family is one which imposes a communal living situation on the unit -- a situation as foreign to those with a suburban notion of dwelling as a thirty-story apartment house. As Dolores Hayden reminds us, "most employed adults in the United States are not interested in moving toward communal groups . . . They desire community services to support the private household, rather than an end to private life altogether." [3] The implication of communal housing for non-traditional groups severely conflicts with inherent cultural values they harbor as Americans surrounding the notion of public-private relationships, as well as serves to marginalize the group in relation to the place and values of mainstream society.

The interior of the house is likewise affected by changes in the activities that are relegated to or removed from the house, as well as the amount of time committed to these activities. Family composition, work habits and place of work, increased technological devices for the house, and other activities which are symptoms of modern living have all contributed to altered uses of the physical spaces within the house and the notion of what home must encompass as a place. While issues of public/ private definitions must be addressed on the interior of the house, new arrangements must also take into account the dialogue between public and private conditions at the community level.

Current Demands Placed on the House

Family Structure and Internal Constructs The typical family structure in the United States has shifted dramatically; the two-parent, two-child grouping is no longer the norm, a multitude of family structures are now recognized as characterizing an average cross-section of the population. Statistics compiled by Harvard's Joint Center for Housing have shown that the country is composed of the following groups: 8 percent single-parent families, 30 percent married with no children -- including both elderly and young adults, 25 percent single-persons,11 percent other arrangements, leaving only 26 percent as what was the typical family structure -- married with children.[4] The prevalence of households which are different from what was previously considered the norm pose a direct challenge to what the culture has sought to uphold through a framework of marketing, media, and legislation as the value of suburban life.

In addition to the traditional family unit, these newly dominant structures include a varied set of living groups, most of which have always been present to some extent, and some of which are entirely new. The oldest form that alteration to the structure of the house has taken based on changes in family composition is the addition of rooms for more children, and the conversion of other spaces such as attics and garages for rental units and for adult children who desire independence, but are not yet financially stable. For many families it is still profitable to add on space for rental occupants bringing additional income to defray the high cost of owning and maintaining a home. These add-on spaces, though, are now being relegated to a wider variety of persons than they originally had been intended for.

The most rapidly increasing segments of the new social composition are single-parent households and the elderly households. The rising divorce rate, with statistics showing that one in every three marriages ends in this manner, has created a large number of single-person, and single-parent households. While divorce is socially accepted, it has yet to find a place of its own in the realm of housing. Many of these persons have been financially relegated to apartments, co-housing projects, or have been forced to "move back home" with parents or other relatives. Statistics have also shown that the average American can expect to live longer; thus the aging population has taken up an increased proportion of the population. The trend has also been to incorporate elderly relatives into traditional and non-traditional family units due to rising health-care costs and a decline in recent years in the quality of nursing home and care services for the elderly.

The "other " category, as put forth by the Joint Center's report, consists of a variety of situations, including unmarried, two adult households, and combined households comprised of people living together that may or may not be directly related to each other. Combined households may also encompass young people or student groups that are living together. In many cases, while additions to existing houses can accommodate many life-styles, these families are excluded from the conception of the American home by the form of the house itself, as well as by an inability to secure financing, especially from government agencies.

Activities for the Home Once comprising 40 percent (1970 census figure) of the population, the shift in family structures noted above leaves only 26 percent of all Americans living in what was the traditionally defined family unit.[5] In addition to overt changes these require in the size, form, and configuration of the house, alterations in family structures simultaneously influence notions and practices relating to the activities and

functions relegated to the home as a place for the portion of the population not living as the traditional unit. There has, for example, also been an increased prevalence of two-earner households in the United States, both as a result of the number of women now present in the work force, and out of financial necessity given the increased cost of living. While this is not necessarily representative of a direct shift in family structure, it has played a major role in the use and place of the house in family life.

Given the fact that in many instances the adult members of households are job-holders, the amount and quality of leisure time that is spent at home has actually decreased on the average. As a result, many of the typical activities carried out in the house have shifted to the public sector. Certain functions for example, have moved away from the house: people eat out more, exercise activities take place at public or private institutions within the community such as schools and health clubs. At the same time, other types of leisure activities requiring different types of places within the house have increased. These functions have predominantly been entertainments such as the television,video cassette recorder, and video game all of which tend to be private or singular functions, and not group activities. Perhaps the new home, because of new family compositions, is becoming a place of quiet retreat, and not one of constant social interaction, as the parlor and formal dining room might have promoted. Spaces seem to be tending toward places which individual family members pass through at different points, as they pursue their own schedules and move on to their own spaces. A case in point is the trend toward building master bedroom suites -- large, autonomous places removed from the bulk of the house and the rest of the family.

New trends in the relationship of work and home in America have also brought non-traditional functions into the place of the house, and have thus placed demands on the types of spaces that must provided. An increased use of home computers and telecommunications capabilities has allowed a greater portion of the work force, both men and women, to work at home on a regular basis. The total number of "telecommuters" in the United States in 1992 was 6.6 million people, an increase of 1.1 million from 1991.[6] The question becomes one of the relationship of this new office space, outfitted with the latest technology, to the traditional spaces and activities of the house.

For many, the decision to work at home is sometimes merely a matter of convenience, or preference, but for others the decision may also revolve around issues of child-care. Whether they have chosen to work at home or not, shifts occurring in the position of women and men relative to the work place have caused the center of child care to alter in relation to the house.

The form and place of child-care has shifted, causing such institutions as day-care centers, schools, and other adult figures, who are not necessarily a part of the household, to play a greater role in this function of the family. Given the fact that there may be an adult working in the house, the relationship between child-care space and work space within the house deserves attention. Even if there is no parent present during the day, the needs of children and their activities deserve more attention than the mere conversion of a basement space, as happened in the postwar house.

A final category of functions that are greatly changing the way in which Americans inhabit their houses is the addition and incorporation of new means of communication and entertainment into the house. The ever increasing availability of communication devices has significantly affected the use of spaces within, as well as the frequency of, and means through which the occupants within interact with each other, as well as with the world outside. Televisions, stereos, cable TV, personal computers, portable phones and fax machines all shape the way in which the inhabitants interact with the community around them. The front porch no longer serves as the point for accumulating community news, and the living room is no longer a place to socialize with the Joneses while sharing a television. The family room, perhaps provides a place for children to share such activities with neighbors, but most communication and news inevitably are received within the family unit, if not on an individual basis within the household, as most houses now contain more than one television, radio, and telephone. As a repository for personal possessions, the incorporation of places for the new instruments of communication within the constructs of the house is an issue of significant import, and is one that has an effect on the relationships that occur with the house, as well as those between the house and the outside world.

Public/ Private relationships As a whole the relationship between occupants and community -- between the public and private realms of the house, also requires reconsideration. The conception of the house and yard has a confused meaning in the suburb. The phrase "single-family detached home" itself is indicative of the inherent urban and social problem with this relationship, of the house as something that is removed or cut off from its surroundings. Here, the space in which the house is sited lacks the definition public/ private spaces that is found in urban areas, such as Boston's Back Bay and the row houses of Philadelphia, and relegates the yard to a position that is similar visually to the notion of the common, a public open space. Intrinsic in this problem is the fact that the suburban house also lacks a place representative of interaction between the

community of the house interior and that of its surrounding environment. The exterior definition of the spaces of the yard, which potentially influence the use and distribution of spaces within the house, need a clarification in terms of what belongs to the public realm and what is under the domain of private ownership. The issue at hand is one of both visual privacy and physical security. Prevalent in the older houses of small towns or urban communities is a front porch, a stoop, an awning, or some element which serves as a definition between these two realms as one enters the structure. In many instances, it is these places that traditionally served as the communication point between people from the community and those in the house -- it serves as a gathering point for information. Since activities of communication have become inwardly focused, these places have lost significance and an abrupt collision has developed in place of sequence of spaces that delineate the transition of public to private space. Simultaneously, a series of transition spaces from public rooms to private interior ones is missing in the configuration of the suburban house itself. Often, given the current disposition for open space planning on the interior, the front door opens directly onto the living space giving full view to all other parts of the house. An interior spatial arrangement that is sensitive to issues of privacy is as important as the definition of public spaces that occurs outside.

A key element in the discussion of entry and the transition from public to private spaces is the issue of automobile dependency, a dominant element of suburban life. Given the fact that most traffic to and from the house is by automobile, and entry occurs from the garage, the significance of this place in relation to the front door, as well as to other points of entry, is critical. Perhaps the formal front door no longer has any relevance considering that the usual transition of spaces from exterior to interior are no longer associated with it. Additionally, the driveway has also achieved an ambiguous status in relation to the house and the community. It simultaneously must play the role of a semi-public and semi-private place. On one hand, it is a point of public entry, but at the same time it is a private play area for children, definable at the will of parents -- "stay in your own yard" and "don't ride your bike in the street."

Along with a lack of spatial definition in regards to the yard, a weakening of a neighborhood structure in the suburbs has also been compounded by other social factors. There is less opportunity for communication due to the notion that less time is being spent in the house. Children, as they grow older lose significance as agents of communication because they do not necessarily attend schools in their immediate community, and in spending more time at school each day, are removed from their neighborhood context. The loss of community use of what is

loosely defined as a public realm in the suburban block contributes to a need for a more rigorously defined sense of place associated with the environment in which the home sits.

Changes in the Marketplace

Visible evidence of some changes in social structure can be seen in both alterations made to existing housing stock and in the options currently being marketed for new houses. Despite its planned room for expansion in places such as the attic, the inadequacies of the postwar house were evident early on. In Levittown, for example, the supplemental attic space was not always sufficient room for growing numbers of family members and more space had to be added to the house in other ways. Most Levitt houses have been altered so, in fact, that those still in their original condition are now being preserved as landmarks in Long Island.

Today these houses and others like them continue to be altered to fit "modern tastes" -- several companies even exist which specialize strictly in remodeling Levittown houses. The Zino Company is one such builder, and offers packages which will change both the image presented by the house and the physical structure of the place. Kitchen and bath remodeling, "A Dramatic New Look for Your Home" by changing the siding, roofing and windows, and annually revised changes in landscaping, color and finishes all promise to reconcile the existing home with current tastes. Extensions, "Add-A-Level" alterations, dormers, playrooms (which are not necessarily spaces for children), added garages, "Solar Passives," "Mother-Daughter Conversions," and converting kitchen/dining/living room areas into open-plan family rooms all present physical alterations to the spaces of the house's interior to fit new needs.[7] While these modifications present ways of adapting existing structures, most are still carried out on the postwar house for families with compositions akin to that of the typical postwar family, and present no option for other living groups beyond that of being forced to fit into the standard model.

Recent developments in the housing market have reflected some of the changes in the social environment. In response to the aging of the American population, large, first-floor master bedroom suites can be found in many new model houses. This new room, or set of rooms, however is merely an exaggeration of the master bedroom, typical of the standard suburban house, in its location and proportion to other bedrooms. With an increased amount of time being spent in the work place by adult members of the family, most builders have chosen to promote a large family space and not formal dining and living rooms, since less time is being relegated to formal

entertaining. Separate rooms or apartments, which often have their own entrances, are being added in some cases as semi-autonomous places for elderly family members. Elements such as porches have been added by some builders in order to provide the look of a small town. These pieces fail, however, to provide the communication aspect that they once held, as the back yard deck is still the social space for the family. Despite these attempts at new perspectives for the house, most are merely adaptations of the place, and are meant for the same composition as their predecessor, the postwar house structure.

The response of the market to the needs of groups other than the one traditionally taken as the norm has been minimal; its vision has not strayed far from typical forms and has not grappled with the question of how to incorporate such groups into the suburban ideal. The single-parent portion of the population, for example, is in many cases restricted to apartments for financial as well as funcitonal reasons. The response on the part of the building industry thus far has merely been the addition of day-care centers to the planning of new apartment complexes and housing developments. Alternative housing units created for these and other groups have also tended to be communal in nature, co-housing efforts being just one example. These communal places, in many instances, do not sufficiently address issues of public/private relationships and the desire for private propriety that even an apartment unit has to a certain extent. "Shared housing programs do not acknowledge that the significant spatial conventions most of us carry with us are not so much a function of square footages as they are of a series of gradual spatial transitions form community to privacy." [8] Both co-housing efforts and apartments also fail in the sense that they cannot achieve the same feeling of autonomy and individuality-of personal space, that a detached house is able to provide.

At one time, "the two basic Levitt houses -- the Cape Cod and the ranch -- were designed to grow with the families inside," [9] but more than just the family has grown since their conception, and shifts in the over-riding social structure have caused even the basic model to become outmoded in many ways. While homes continue to be built based on a preconceived notion of what the American family is, "the number of families fitting the blueprint by which such houses are built -- categorized by the US Bureau of the Census as 'married with children' -- is falling dramatically."[10] The current structure of the building process with a market-controlled notion of family structure and its attendant spatial needs, has bound construction to a specific conception of the ideal house, and a new definition of this place that is more universal or adaptable, is needed. In

light of such dramatic shifts in the American life-style, the form of suburban house needed is perhaps based in the spatial necessities of the house as a place, in order to provide a sense of home the diversity of families present in the population. This place must allow families to live in the realm of the American dream, as owners of a detached home suited to the way in which they wish to live.

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[1] Dolores Hayden, Redesigning the American Dream: The Future of Housing, Work, and Family Life (New York: W. W. Norton and Co., 1986), p. 185.

[2] Hayden, p. 185.

[3] Hayden, p. 179.

[4] Jerry Ackerman, et al., "Beyond the White Picket Fence: Our Changing Lives, Our Changing Homes," The Boston Sunday Globe , 4 October 1992, pp. A1- A12.

[5] Jerry Ackerman, "New Families Challenge Traditional Spaces," The Boston Sunday Globe, 4 October 1992, p. A1.

[6] Jae-Bok Young, "Ranks of 'Telecommuters Grow," The Christian Science Monitor , 25 February 1993, p. 6.

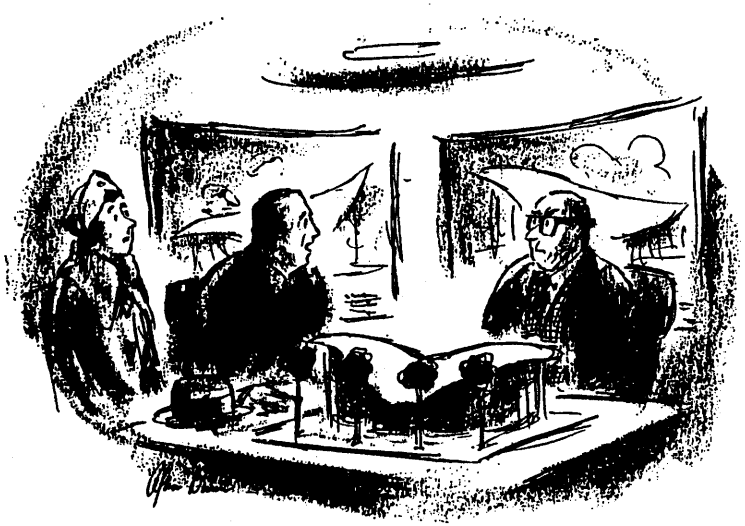
[7] Zino Construction Co., Inc., Home Remodeling Guide (Levittown, NY: Zino Construction Co., c. 1990).

[8] Hayden, p. 184.

[9] Georgia Dullea, "The Tract House as Landmark," The New York Times, 17 October 1991, p. C8.

[10] Ackerman, p. A1.

Chapter 4
Home Through Spatial Definition



"Do I have to live in a statement? Can't I just have a Home?"

Chapter 4:
Home Through Spatial Definition

Given the divergent expressions of home needed today, the spatial and organizational characteristics of several existing examples of domestic architecture -- urban, rural and suburban in nature -- provide alternatives for redefining or reconfiguring the present house so that the place may be more flexible in its response to the current social context. While changes to houses in suburban developments, such as those at Levittown, happen as soon as they are built, these changes remain in the realm of alterations to a given model. As design responses, these modifications are insufficient in that they are merely adjustments to a basic structure, fraught with problems. In the effort to construct new spatial structures, past configurations can provide insight into issues concerning the association of house and community, the public realm versus private interior, the displacement of rooms, and relationships among adjacent spaces. While the examples presented are not necessarily appropriate as complete models, and in many cases the spaces found within focus on period specific uses, certain spatial qualities are informative references as to what a new conception of the suburban house might be based in.

Organizations relative to transition, threshold, access, and individualization are afforded by these buildings. Qualities such as these provide insight into the means by which adaptability and flexibility, characteristics not present in the unified block of today's model, can be instilled in a new conception of the house. In the first set of diagrams, the response to contextual relationships seen in several of the cases, such as Radburn, New Jersey, and the Usonian houses, bring an understanding of the interface between the private realm of the house and the community in which it sits. The transition diagrams record the potential relationship between public and private notions of place as one moves through the interior of the house. As a third category, the access diagrams take into account the notion of entry, as a possible multiplicity of points, both interior and exterior. This condition allows for entry into private portions of the house without crossing or disturbing public spaces. Similar to access and transition is the notion of threshold. This set of diagrams takes on aspects of both categories as it deals with movement between spaces within zones of the house. For the purpose of this study, individualization, as a spatial grouping, is seen as the ability to define a space as one's own, even when that place is within the

context of a larger room. The last set of diagrams centers around intentional flexibility of size and organization that is built into the spatial structure of the house. By focusing on means of organizing and defining space, the characteristics which these various groupings display furnish an informative spatial basis for reconfigurations which can make the suburban house a home.

The Precedents

A cross-section of the precedents studied reveals a diverse set of architectural works which vary in style, culture, and date of construction. Two of the examples employed are representative of intentional attempts by architects at rethinking the suburban, mass produced house. In the case of Frank Lloyd Wright's Usonian houses, the valuable lesson is found in their use of an idealized diagram of public/private, or use, relationships. For Wright, the featured elements of these houses include the provision for a carport, the security of a secluded entry, and the prominence of the hearth.[1] The diagrammatic relationships of these pieces are then implemented with a 2 foot x 4 foot grid based on materials which serves as a regulating system that makes construction cost-effective from a mass-production standpoint. Since the 2 foot x 4 foot module, or "unit system" [2] coincided with materials sizes, there was no waste as walls and openings were located on the grid which was marked on the concrete floor. While Usonian houses can be categorized into five types, each is based on similar set of organizing principles. The clearest example of these spatial relationships can be found in the Rosenbaum House of 1939 and the Pew House of 1940.

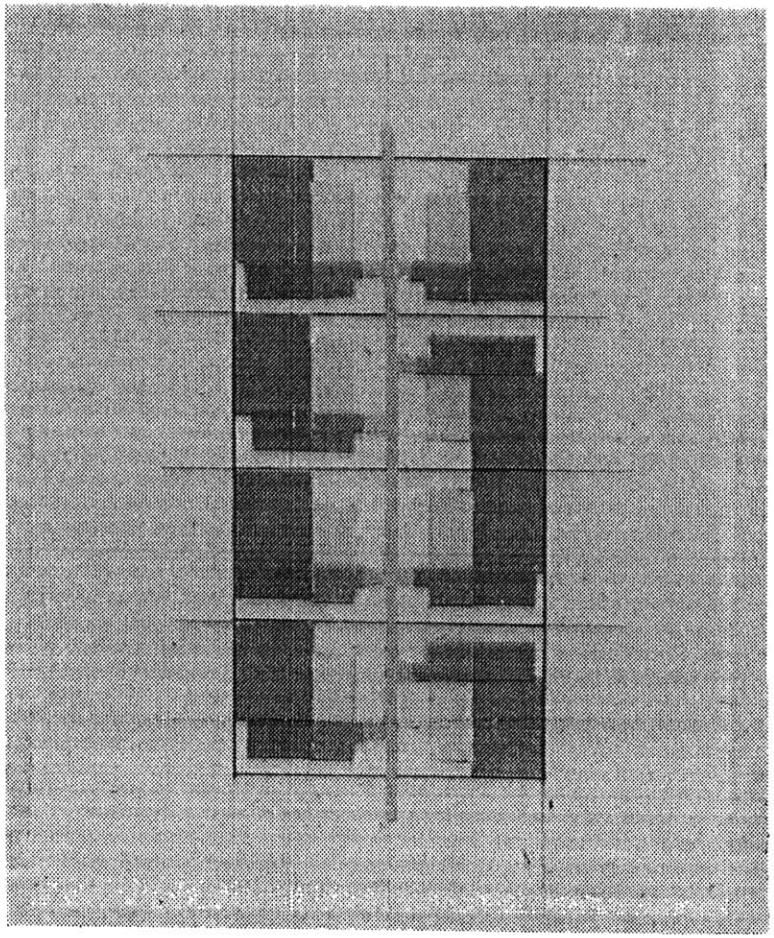
Stirling's "Expandable House" planned for suburban areas at the early date of 1957 is a more rigid diagram than the Usonian model. The emphasis of this radially organized scheme, however, is on the adaptability of the space to a variety of family sizes and the ability of the house to accommodate incremental growth. It likewise employs mass-produced elements to achieve this end on the scale of entire rooms.

Insight into the arrangement of rooms, and relationships or adjacencies among them is provided through examples of houses from the eighteenth century and the late nineteenth century. The notions of a suite of rooms and of a variety of spatial definition within individual rooms of the precedent houses are significant aspects of their character as places for habitation. Often intended for larger family groups and a variety of people living in the same place, these houses are often easily converted to new uses. For example, the Hôtels Crozat and d'Evreux, French urban dwellings of the eighteenth century, exhibit a conscious organization of space as one moves from public street

to private garden. The Low House by McKim, Mead, and White also exhibits useful groupings of spaces and translatable notions of public versus private space. It is, however, a sizeable building compared to the needs of the typical suburban house, and a large percentage of space is designated for outmoded institutions. The examples of typical Victorian homes taken from Bicknell's Village Builder, one of several standard period building catalogues, exhibit similar uses of space. While places such as these could easily be converted to suit certain aspects of today's needs, as with the suburban house it would merely be a case of accommodating ways of living through the adaptation of old forms and standards, and not one of planning for a future diversity.

The final examples from which diagrams were extracted are significant for the relationships they express in terms of the definition of space and territory in a community. The influence of what connotations the public realm has in relation to the house as a piece simultaneously provide interesting models for a reciprocity that may occur on the interior of the house. Planned in 1928, the Radburn project offers a reversal of the traditional placement of public and private spaces. " 'The Radburn Idea,' to answer the enigma 'How to live with the auto', or, if you will, 'How to live in spite of it,' met these difficulties with a radical revision of relation of houses, roads, paths, gardens, parks, blocks, and local neighborhoods,"[3] and provides a possible response to the issue of the interface between public and private definitions of place in the suburbs. (Refer to Appendix B for documentation of a typical site plan.) Several aspects of Radburn's design reinforce the separation of the idyllic garden and the service-oriented street. The superblock is the basic unit of development and houses are organized as cul-de-sacs with a central park system separating the superblocks. Distinctions in traffic distribution are made between service roads to private homes and major arterial ones -- a feature which served to create a collective driveway, and to separate pedestrian and vehicular traffic. The deployment of rooms within the house is based on the separation of public and private spaces as defined by means of arrival, thereby creating "the house turned around." [4] The park system, a public common, not the roadways, is the "backbone" of the development. [5] The row house or brownstone, such as those common in Boston and Philadelphia, as an urban definition of public versus private outdoor space provides similar clues as to definition and transition between these two realms.

The diagrams of these models are thus organized by the issues around which they are focused: contextual relationships, transition, access, threshold, individualization, and intentional flexibility. Each of the issues is relevant to the needs of the

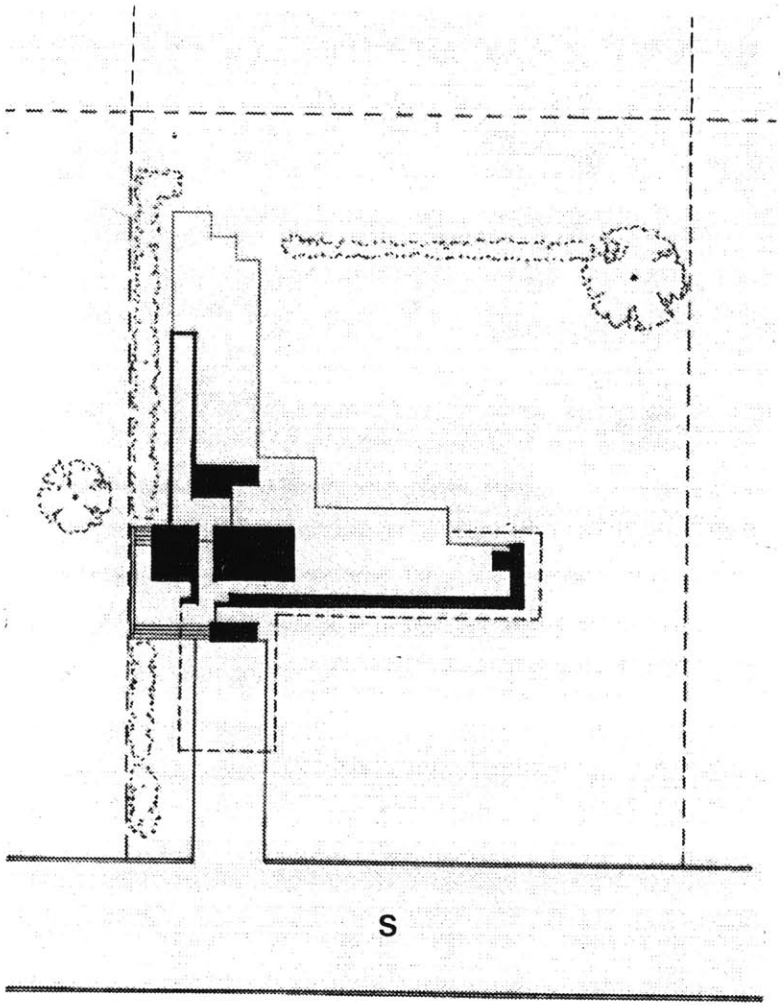


1. This diagram represents an imposition of the public and private zones of a Usonian home into a context of typical suburban lots.

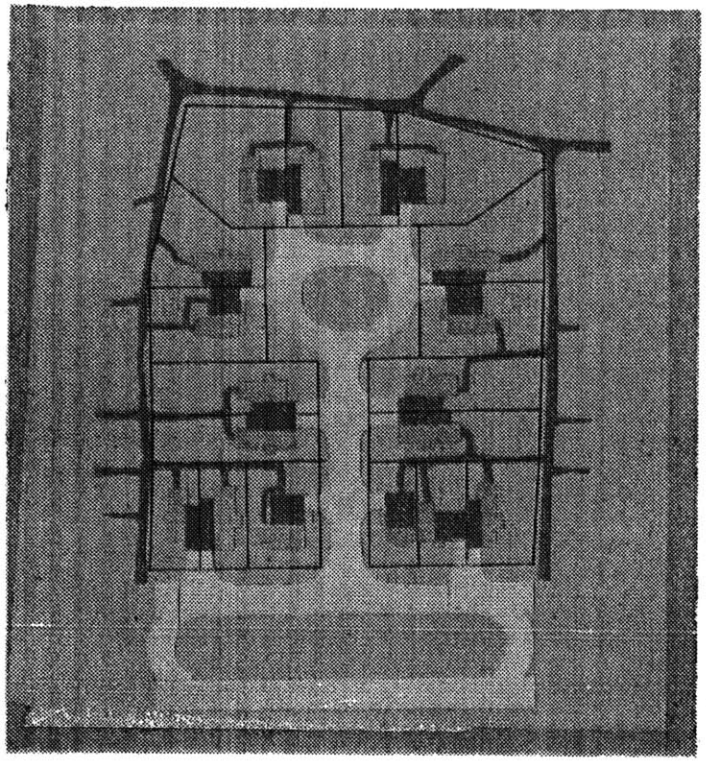
suburban house, and as spatial diagrams, can serve to reconcile the lack of fit between the current house model and the life-styles and households that must now find a home within it. (Refer to Appendix C for Diagram Legend.)

Contextual Relationships

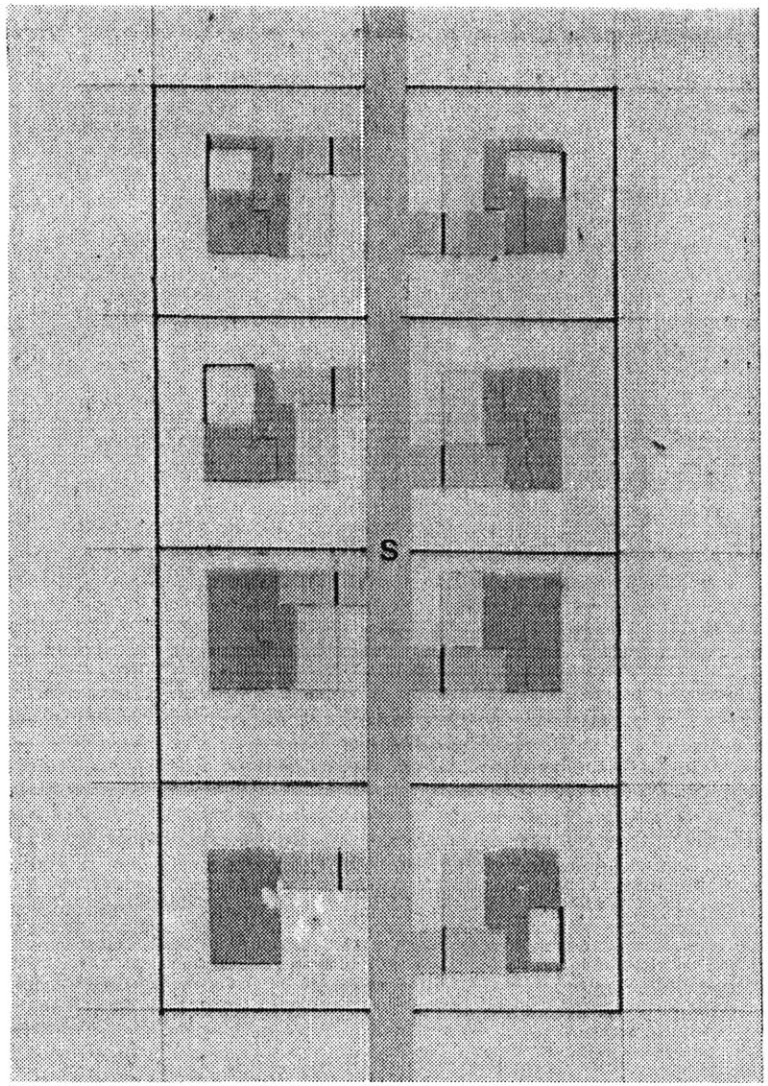
In its environment the suburban house sits as an object in a significant position when considered relative to others like it in a development. The nature of its relationship to surrounding houses has a direct impact on what is perceived as public and private domains in the external environment. Likewise, these perceptions of ownership have a potential impact on the awareness of degrees of privacy of interior spaces as well. Several of the diagrams indicate studies of actual neighborhood plans and zoning [6] within houses, while diagrams such as 1 and 3 represent the zoning of specific house examples when placed into a typical suburban context. (Figs. 1 - 5.)



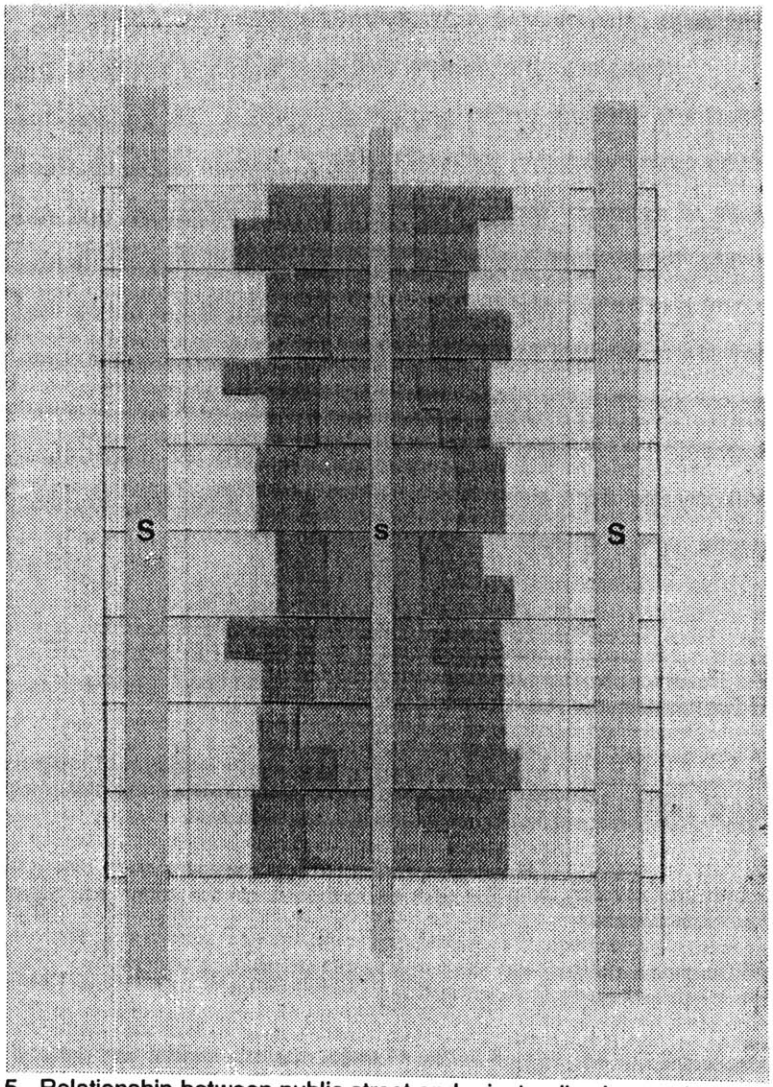
2. Privacy from the street is insured by the location of the service zone at the point of entry, as well as through clerestory windows and built-in shelving which lines the front wall.



3. Contextual relationships in a typical cul de sac at Radburn, New Jersey.



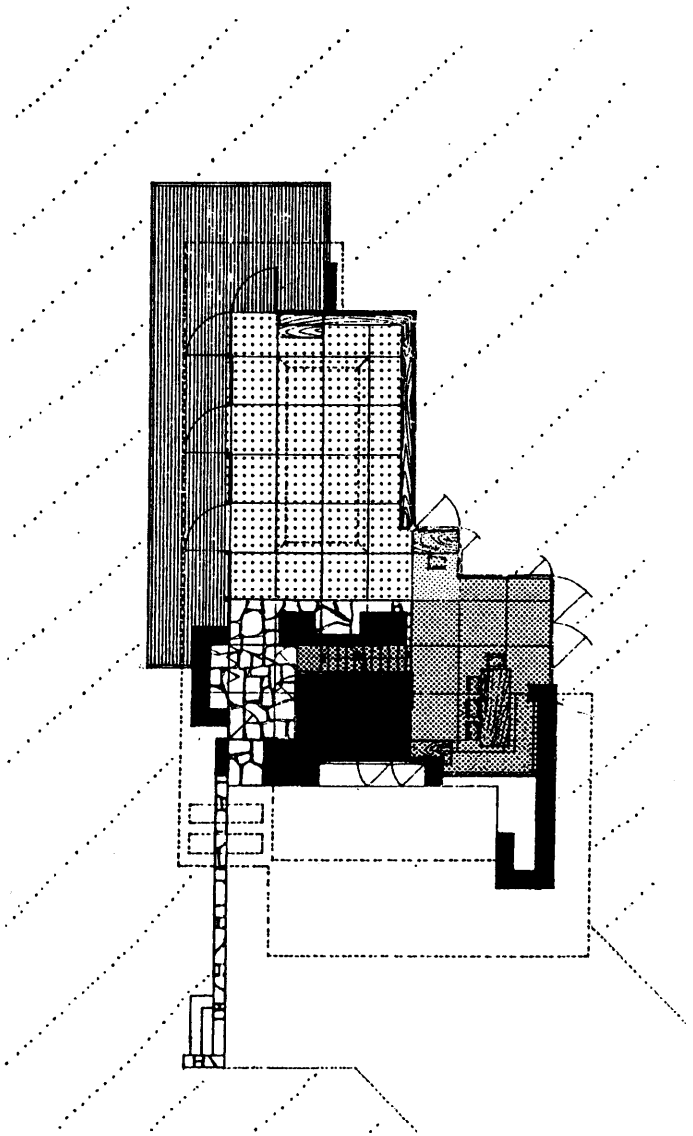
4. The suburban house prototype by J. Stirling when placed into a suburban landscape.



5. Relationship between public street and private alley in an urban row house situation.

Transition

Intrinsic to the spatial structure within a house is the dichotomy between public and private spaces. As a place, the house must maintain a delicate balance between highly stratified types of spaces: those which are for the individual and are private, those which are public, in the sense that they are family, or group-oriented, and those which are public in the sense that they are accessible to persons from outside the household unit. Interior definitions of public and private zones, as shown in these diagrams, can take their cues from site or contextual relationships, from entry points, and through adjacency to other spaces. (Figs. 6 -12.)



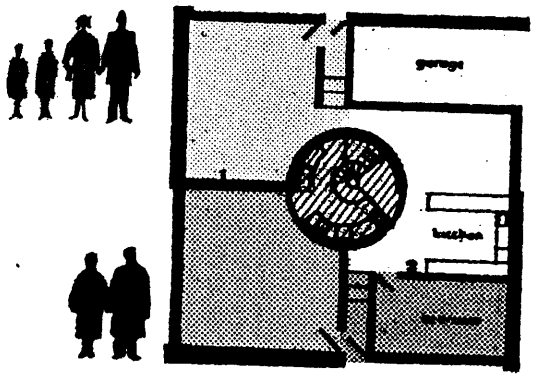
6. Transition from public entry space, to private dining space and stair to bedrooms in the Pew House.

7. Stirling presents a spiral structure of spaces as a means of bridging the transition from public access on the garage side of the suburban home, to the privacy of the garden at the opposite side.

8. The conception of space in a traditional Japanese houes is based in a four-part division, with the spaces furthest from the entry gate being the most private.

9. Diagrams showing the zoning of public, private, and service space in one-zone and two-zone type Usonians.

10. In the French hotel, a series of major spaces, interior and exterior, is used as a means of distinguishing, in sequential manner, the space of the street from that of the private garden.



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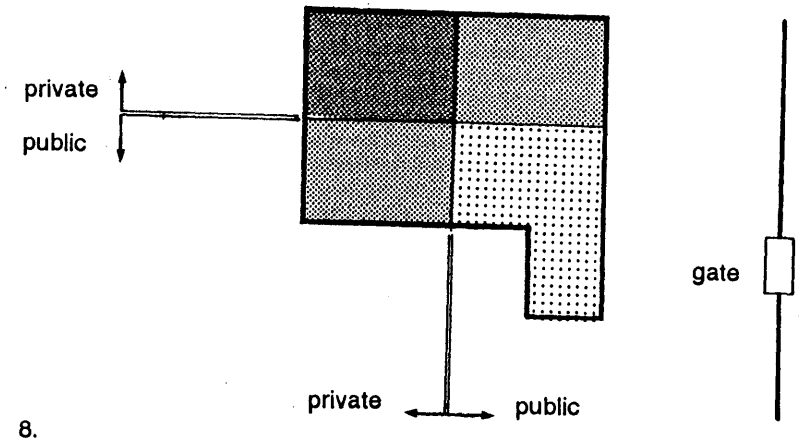

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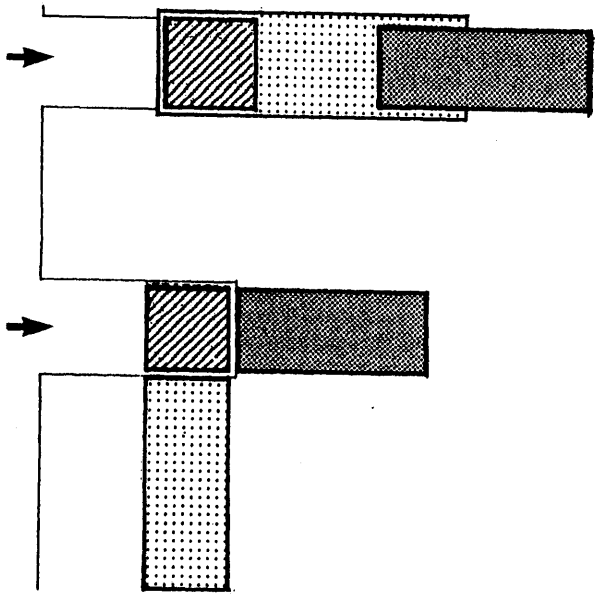

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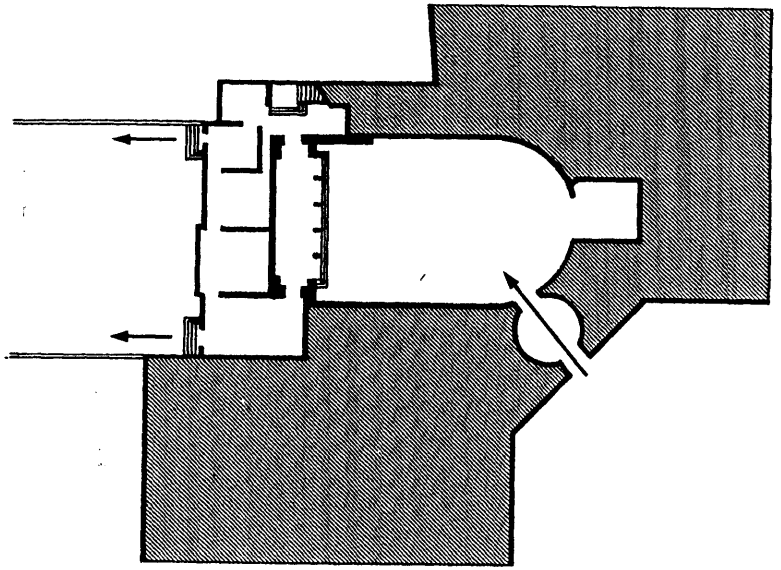
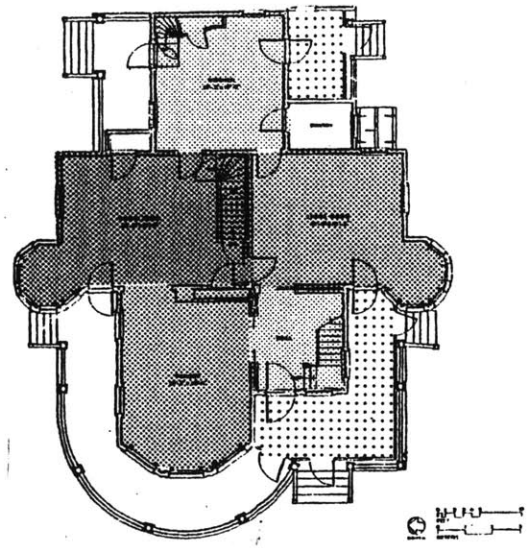


10.

11. In this home from the Victorian era, a series of porches and screened areas add to the transition from the exterior world into that of the home's interior.

12. Typical of many Victorian homes, this example incorporates pocket doors which allow the conversion of separate rooms into a suite of fluid spaces on the privary floor. On upper levels, doors and vestibules within closet masses also allow individual spaces to be added together to form larger units.



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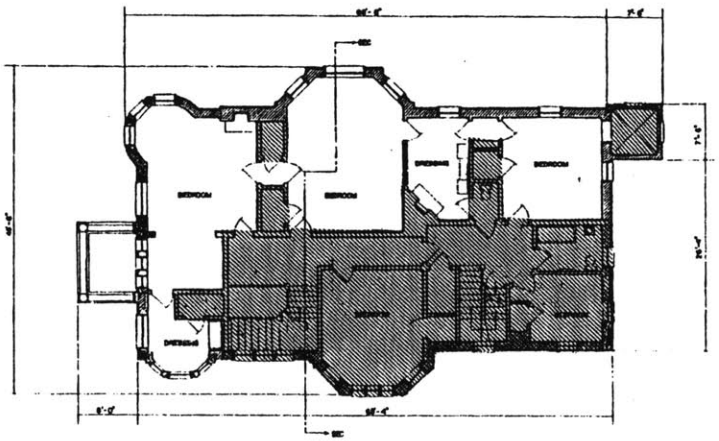

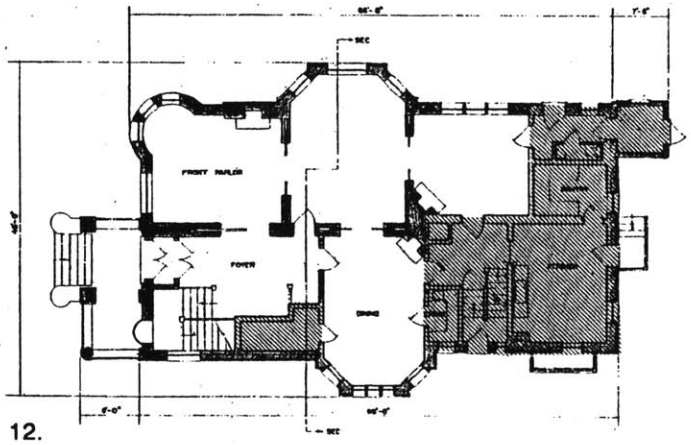

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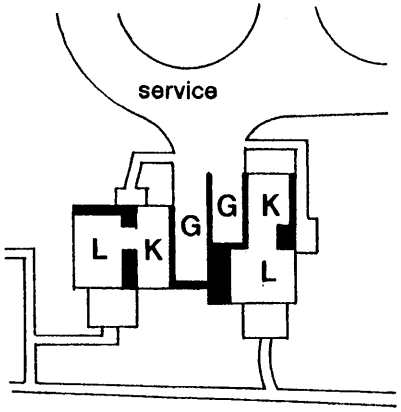
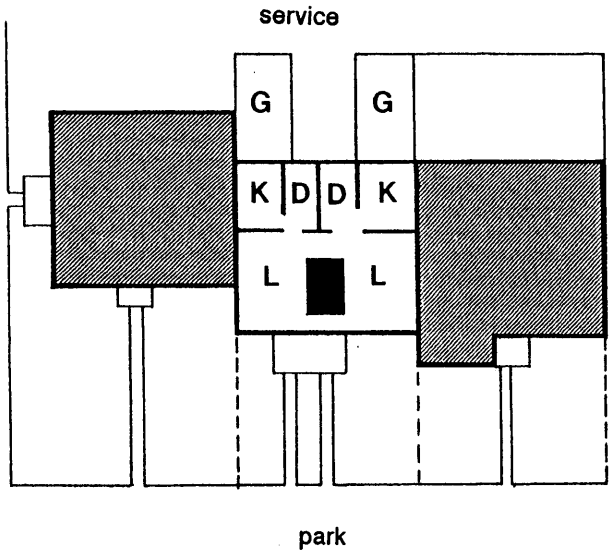
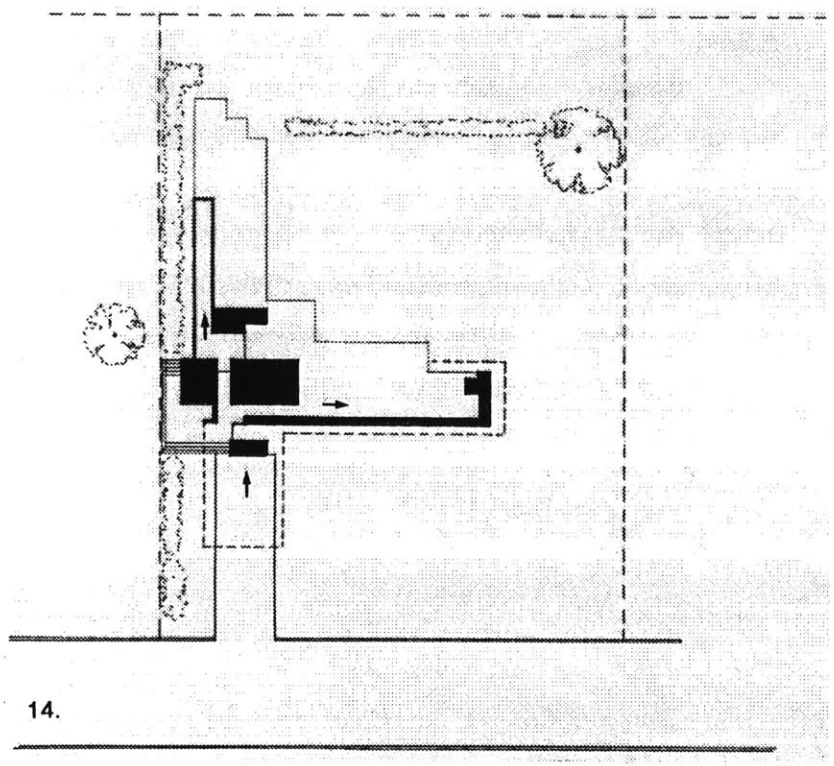




Access

Strongly connected to the idea of transition, is access -- a series of entry points for pedestrians and vehicles. It is also a multiplicity of points that encompass both the passage from the public exterior to the private interior, as well as that from a public interior space to one of greater privacy. In the latter situation, it can serve as an acknowledgement of entry into a family space or suite of rooms with a specific function. (Figs. 13 -15.)

13. The original plan for Radburn shows a separation of means of access to the home: vehicular on a service side (including garage and laundry areas), and pedestrian on a park, or formal side. This separation dictated the original zoning in the plan. In the later version, spaces such as the kitchen become volumes that mitigate the two worlds in order to provide better means of observation.



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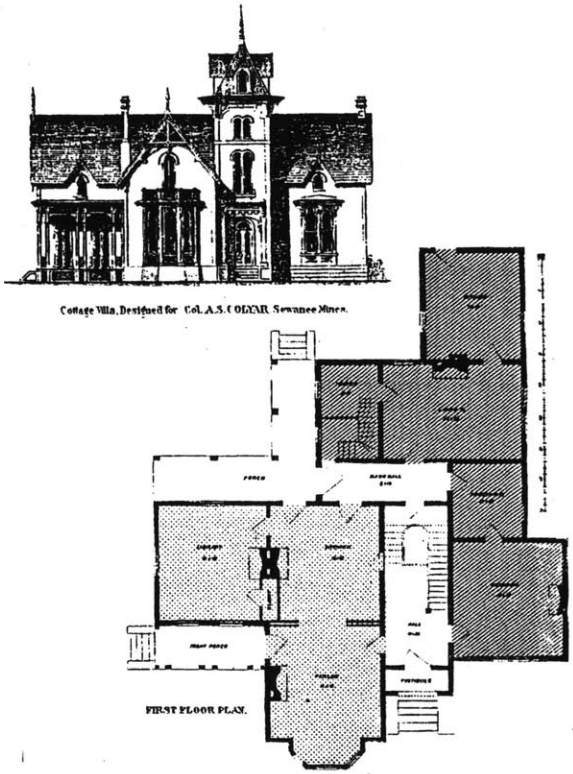

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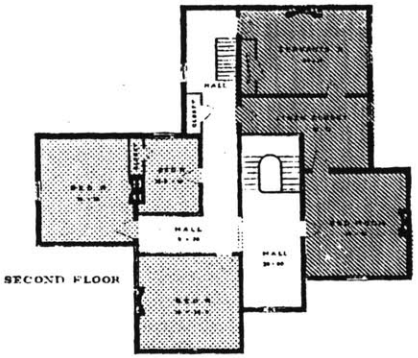
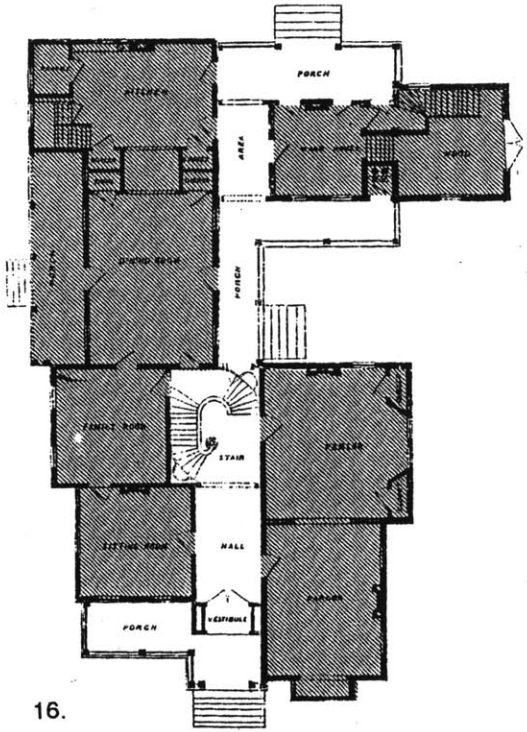


14. In the Rosenbaum house, a two-zone Usonian, the service core filters circualtion between the more public living area and the private bedroom wing. Each wing is allowed a view to the garden.

15. What might be termed flexibility of the Victorian home is derived from notions of served and service within the house. These homes, because of multiple entries, and distinct zoning, are easily converted into multi-family dwellings. The ability to create suites of rooms also makes division and alteration feasible.



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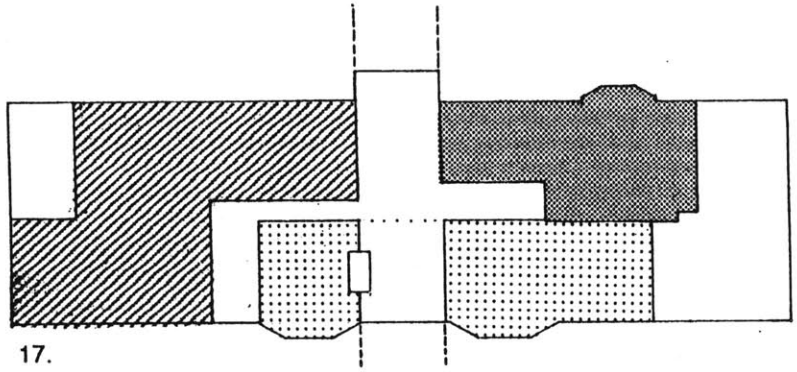


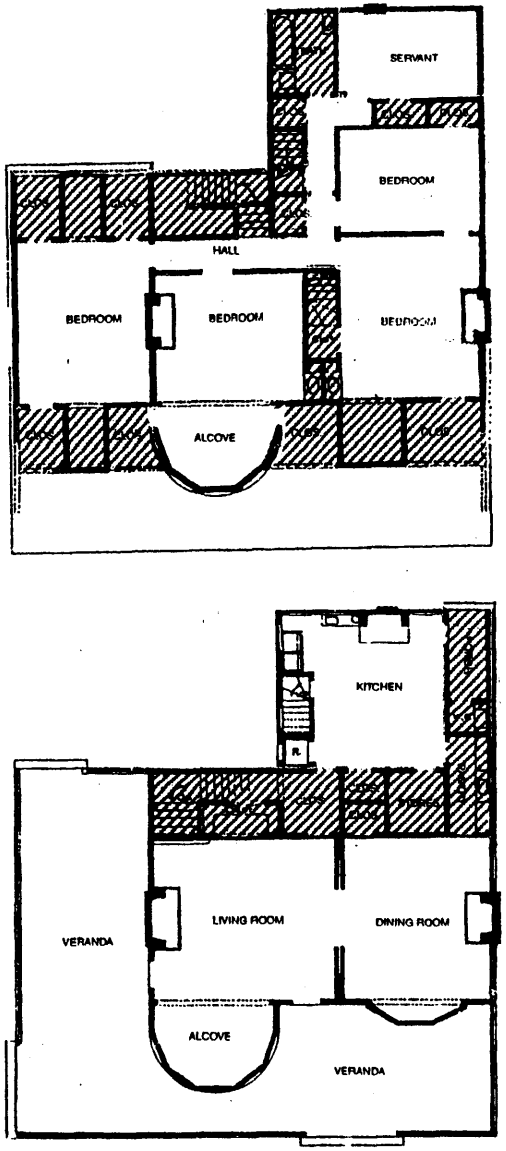
17.

Threshold

In this grouping, the examples provide insight into aspects of the house concerning the arrangement of rooms and the significance of adjacencies among interior spaces. In many instances a common room, or a space adjacent to a public room, serves as a place which distinguishes degrees of privacy and place. The notion of threshold implies a crossing, and can take the form of passage through a room, past service or structural elements, or across a circulation space. (Figs. 16 -18.)

16. In this case the public reception areas, the parlors, are segregated from the family spaces in the home by a sequence of circulation spaces, which consist of interior, exterior, and screened volumes.

17. The Low House segregates service and served spaces in two separate wings of the home, as a large public entru hall divides it in two. The major public spaces of the house, however, provide a zone which serves to link these two realms.



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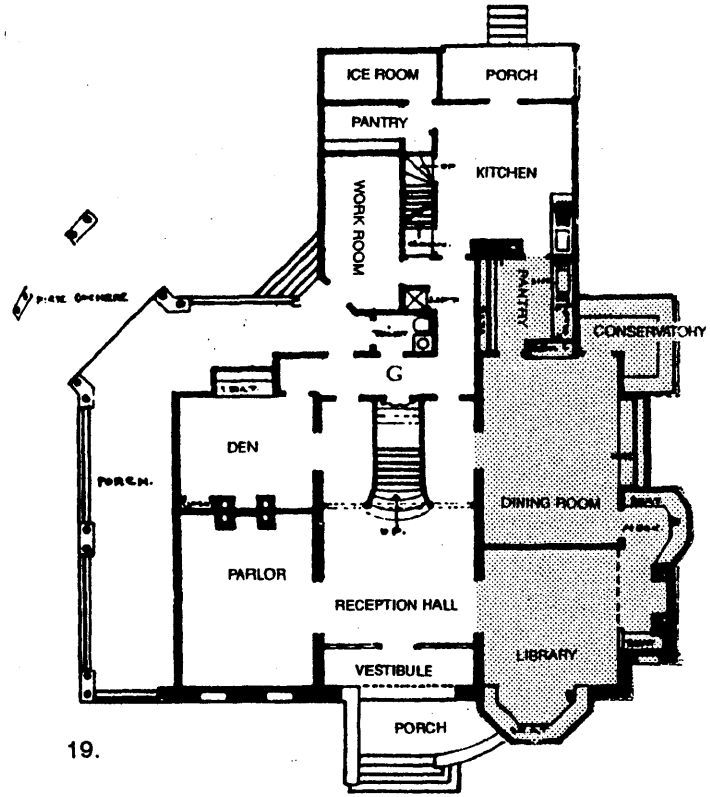
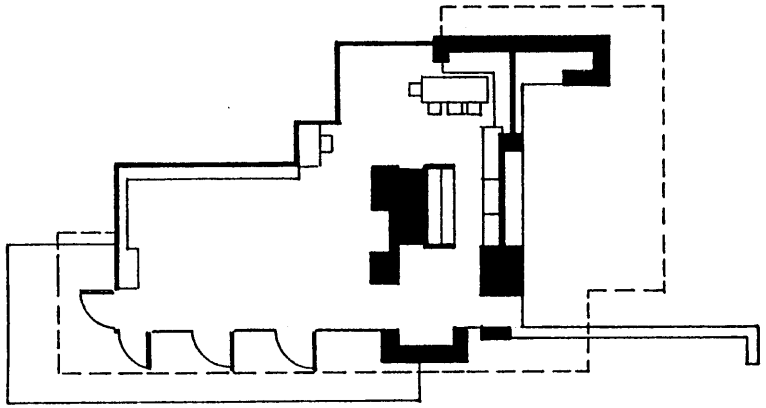


19.

18. Service areas, stairs and vestibules aid in mitigating between served and service realms, as well as between public and private space.

19. Ancillary spaces, arranged in a sequence within the context of a series of larger more public rooms allow for the privacy of individual activity in the presence of a family group. Such zones as this one could easily accommodate study space and childcare areas within the reach of adult supervision (from work or relaxation spaces.)



20.

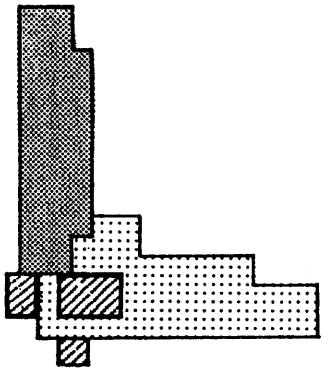
20. Wright also encorporates space for semi-programmed uses in his Usonian homes. In the Pew House, a desk nook, conveniently located near family spaces, also aids the design spatially in creating a greater sense of privacy for the dining area in relation to the public living space.

Individualization

Associated with the notion of threshold, the suite of rooms was seen as a means of providing a sense of smaller common spaces for groups within the confines of a larger house. On the scale of the microcosm, however, the provision for similar types of retreat spaces within the context of a larger room is also a valuable as a means of providing a sense of an individual place in a large household. The ability to personalize these spaces allows them to serve as places for privacy, respite, and individual activity while not being entirely removed from group activity. (Figs. 19, 20.)

Flexibility

Diagrams in this grouping have been compiled based on their ability to accommodate additions to the form and spatial structure of the house without compromising its intrinsic arrangements. In some instances the houses in this study maintain a basic sense of public and private space to which additions are made, while in others the conception of the spaces is completely dependent on inhabitation of the place and intended occupants. (Figs. 21 -25.)



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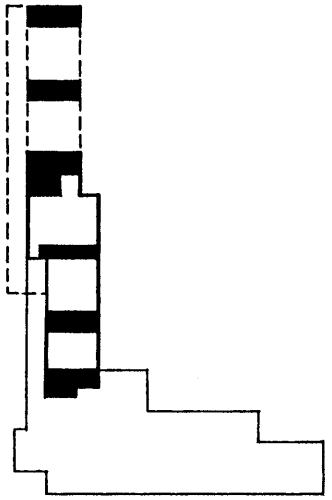
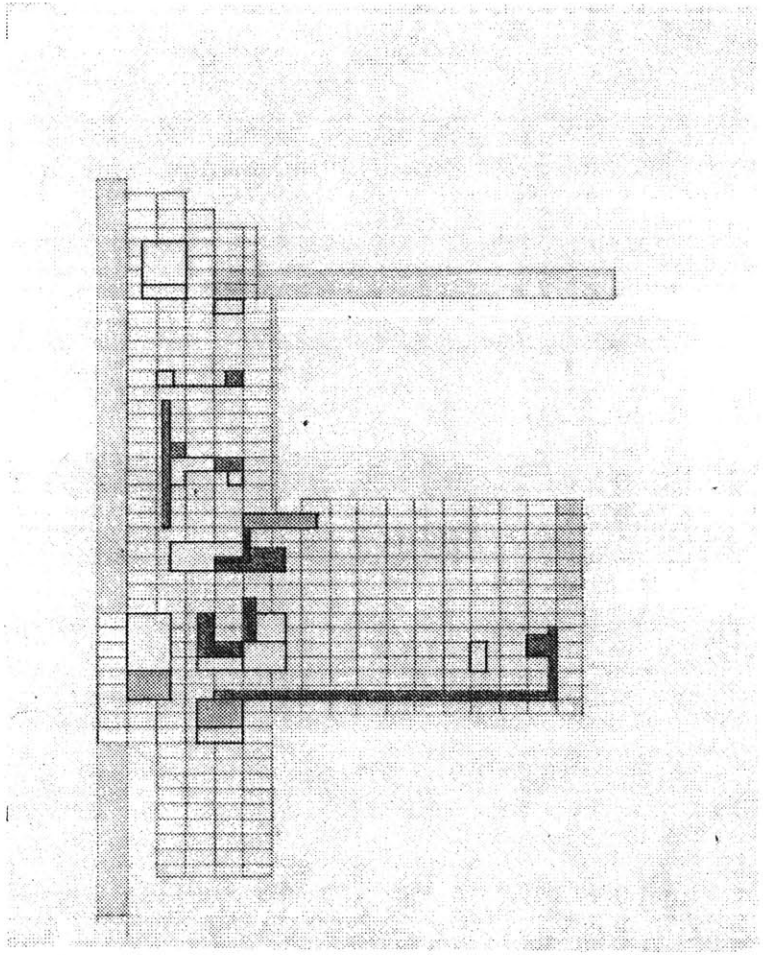


21.b.

21. a. The basic Usonian house separates public and private rooms into two distinct wings. b. This basic diagram incorporates a flexibility relative to an increase in family size. Bedrooms may be added to the privated zone without disturbing the diagram.

22. The use of a modular system for dimensions makes the Usonian cost effective in that the basic grid on which services, built-in furniture, and structure are located correspond to the dimensions of materials.



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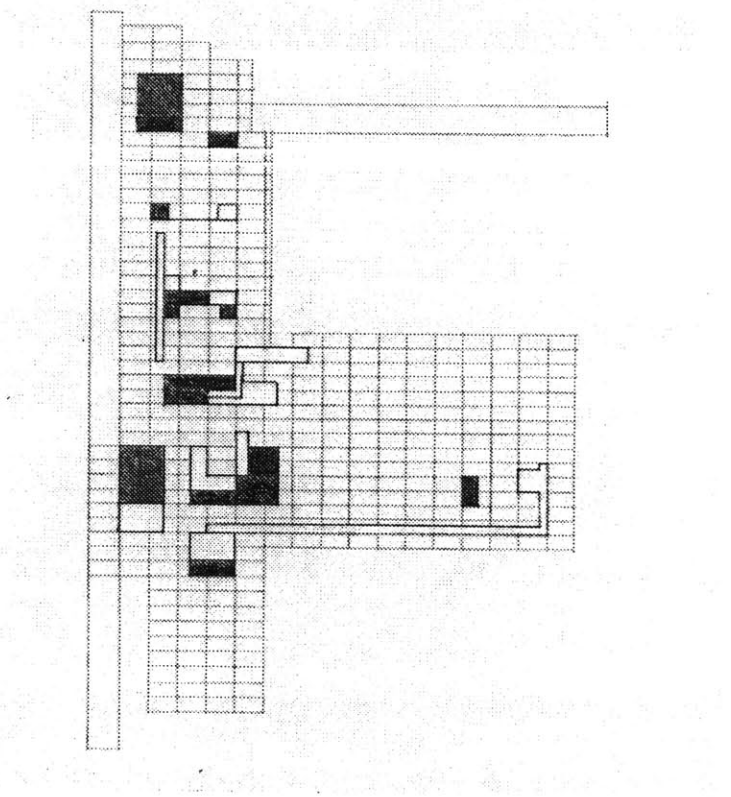
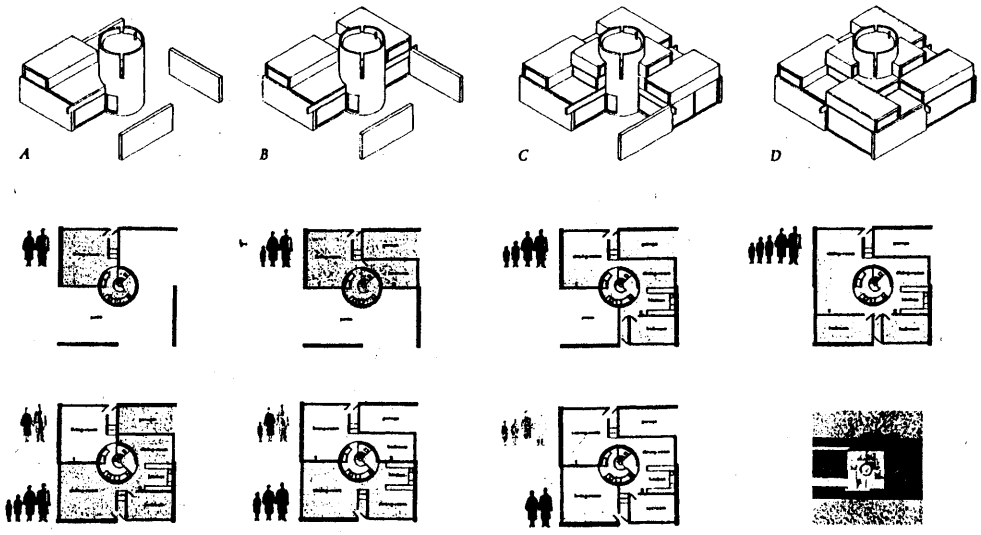


22.b

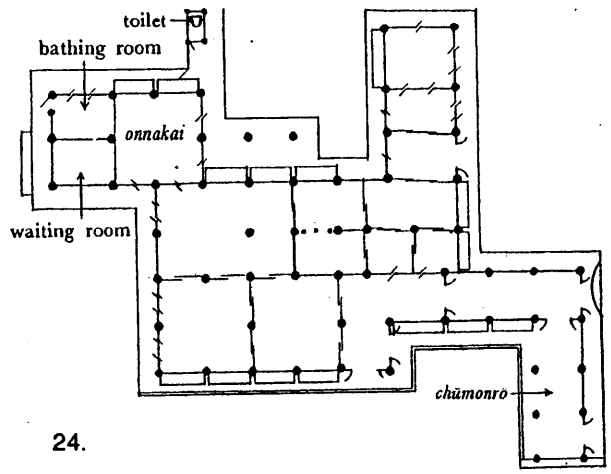


23

23. The concept behind the Stirling house lies in the notion of a modular, or prefabricated, building. By the addition of room units the house is allowed to expand with the needs and means of the family.

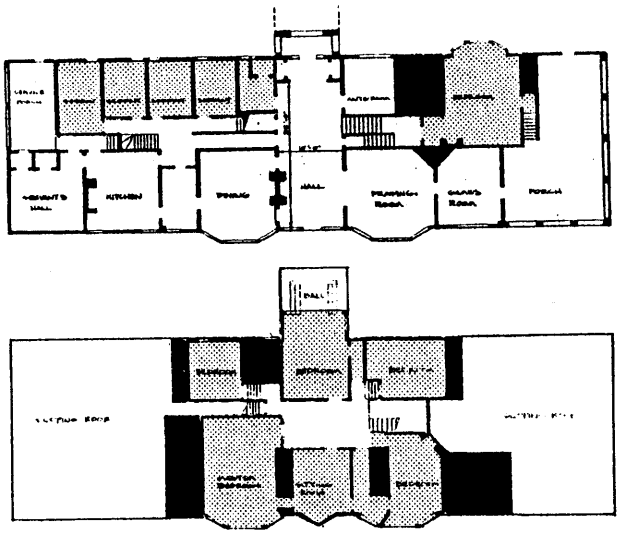
24. The traditional relationship between spaces in a Japanese house is one of near complete flexibility of space, in dimension, size and organization. In an extreme fashion, sliding walls can be moved to allow a suite of rooms to act as a single space.

25. The division of the Low House by the central circulation core and entry hall, allows for a natural distinction between groups of rooms that can potentially be used by separate units within the household. Each suite, conceiveably, could consist of private bedrooms and a central semi-private living or sitting space.



24.

South



25.

Flexibility Through Spatial Definition

While none of these models can function as an ideal on which to base a complete new notion about the nature of the suburban house, several key fragments joined together can act as an impetus for possible organizations. These pieces can be applied to the needs surrounding the ways in which we now inhabit the place, and as spatial ideas, are flexible enough to accommodate future shifts and new paradigms. Taken as a whole, these ideograms provide useful organizational principles from which an entirely new spatial configuration can be created. As tools, they may help to correct the misfit between the exigencies of modern households and architectural response.

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[1] John Sergeant, Frank Lloyd Wright's Usonian Houses: The Case for Organic Architecture, (New York: Watson-Guptill Publications, 1976), p. 91-93.

[2] Sergeant, p. 21.

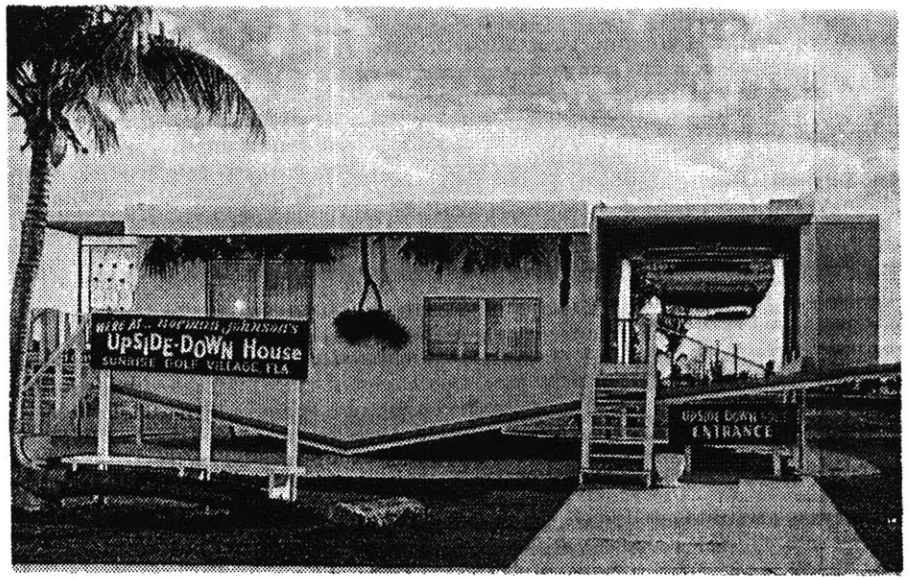
[3] Clarence S. Stein, Toward New Towns for America, (Cambridge: MIT Press, 1966), p. 41.

[4] Stein, p. 47.

[5] Stein, p. 47.

[6] "Zoning" for the purposes of this study refers to territories defined by use and ownership, and not to "zoning" in the sense of regulations associated with municipal codes.

Chapter 5
Conclusion: A Reconfiguration for House and Home



Chapter 5:
Conclusion: A Reconfiguration for House and Home

Given the dramatic discrepancy between the spaces of the suburban house today, and multiple notions of habitation present in the culture, a new conception of house and home is long overdue. Since its origins in the postwar period, the structure of the suburban house as it exists today is based in a singular conception of what house and family are -- one that does not correspond to the multiple social groupings prevalent today. A cross-section of the population shows that there now exists a multiplicity of ways of dwelling in the space of the house that must be addressed. The lag in the development of the spatial structure of the suburban house in relation to the population has left many of these new groups marginalized by the form, policy, and space afforded them relative to the choice of housing. A more flexible definition of the ideal house must be achieved in order to allow the detached suburban residence to provide a diverse population with an opportunity to fulfill the dream of home-ownership and personal life-style.

The implementation of a new structure for the suburban house that is based in a spatial, not a programmatic distinction of place is a means for a definition of the house that can adapt as needed. Designs for the suburban house should reflect this concept of continually altering life-styles, rather than marginalizing family situations not historically the norm by forcing them to adapt to the configuration intended for the no-longer-average, or to resort to an alternative arrangement that is often contradictory to the inherent values of privacy which prevail in the culture.

In formulating a new sense of spatial organization, qualities of place extracted from existing models provide an understanding of the spatial characteristics necessary in making the house function as a place for both collective activity and private, individual habitation. Aspects such as contextual relationships, transition, threshold, access, and individualization serve to support distinctions between public and private realms of the house, while simultaneously allowing for the flexibility necessary to accommodate changing social structures.

These spatial tools lend an appropriate sense of transition from the public space of the community to the house itself, and then to the individual room -- an idea intrinsic to the establishment of a sense of home within the structure of the house. An understanding of threshold is significant given the

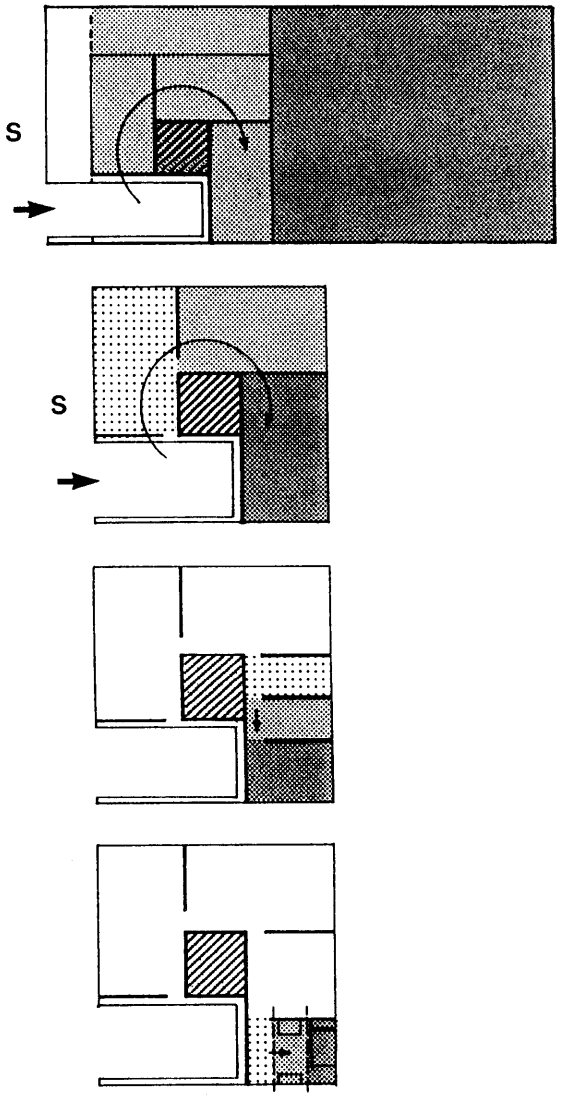
current possibility of several groups living together as the same household, yet requiring a simultaneous definition of semi-private space in order to operate as an independent family unit. The notion of a suite of rooms, or a sequence of transitional spaces, is able to accommodate this situation by providing an adequate sense of access, threshold, and individualization. In creating spaces that are suitable to a diverse range of households and their attendant ways of living, flexibility of spatial zones as seen in the diagrams presented in Chapter 4 is also a necessary attribute for a base definition of the house when designing for current life-styles and future family structures.

The spatial relationships created for the house must provide a lasting structure for the suburbs, while allowing for alterations in the specific aspects of the dwelling that will inevitably change with the passage of time, as the social constructs surrounding the occupation of the place alter. These relationships provide a basic framework that creates definitions between public and private realms, from the scale of the site to that of the individual room.

In the final portion of this study, a series of diagrams of spatial relationships have been derived to accommodate the prevalence of a multiplicity of family structures and changing activities assigned to the space of the home. The intent is that the set of diagrams presented will serve as an operative

Note: Refer to Appendix C for legend of coding used in diagrams.

1. Structure of public and private realms.



framework which define the important spatial and social relationships that will dictate the configurations which make the house, a home. The most significant aspect of a notion of what home is, is that it must continue to change -- as the groupings that define the use of the house alter, its form must evolve to meet their needs.

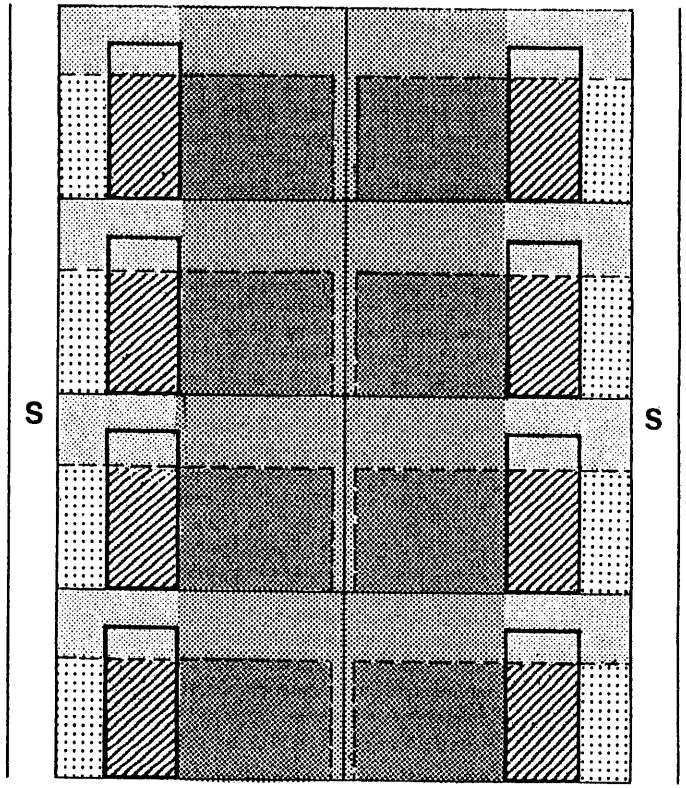
Reconfiguring Notions of Space

In the diagrams, spatial relationships provide a basic structure that creates definitions between public and private realms, from the scale of the site to that of the individual room. By focusing on the spatial organizations which make the place, rather than on specific room alterations or designations, zoning concepts based in issues of context, transition, threshold, access, and individualization present a rich structure for the variety of interaction found in the house. In the structure of the diagrams, a level of flexibility is achieved that can accommodate existing multiple variations of family which include, but are not limited to: single-parent, additions for elderly relatives, combined households, and space for autonomous older children and tenants. In many cases the intent of these diagrams is simultaneously to reflect a shift in the intensities with which these spaces are used. The conscious zoning of space for what may or

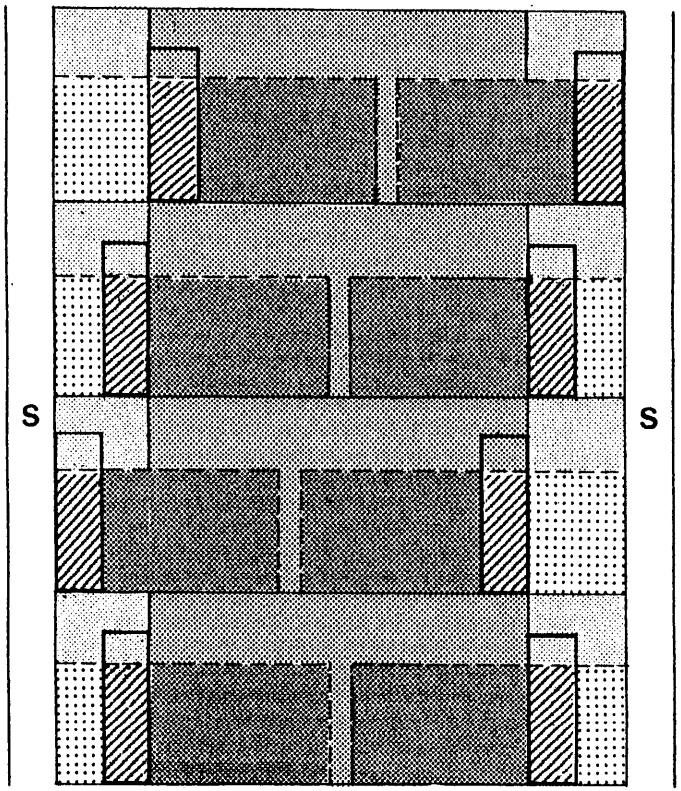
may not be entirely new uses, such as places to conduct business in the home, or improvements to spaces for children, is also accounted for. The diagrams presented can then serve as a framework for defining the important spatial and social relationships that dictate the configurations which allow the house to become a home.

Most important in the notion of zoning the space of the house, whether it be for alternatives in use or sense of habitation, is the distinction between the public and private realms of the place, both on the level of the macrocosm and the microcosm. A sense of the transition from the public space of the community to the house itself, and then to the individual room, is intrinsic to the establishment of a home within the structure of the house. The series of spatial diagrams developed is meant as an operative means for ensuring the establishment of the domains of home, while simultaneously accommodating the multiplicity of a population. Embedded in the diagrams are other spatial characteristics derived from the precedents, such as issues of context, threshold, access, individualization, and flexibility. (Fig. 1.)

In the diagrams presented here, the site grouping encompasses public/private transitions at a community level, the house category establishes zones of rooms which by use correspond to site zones, the realm diagrams provide distinctions



2. Site zones:
Street, house, yard relationship.

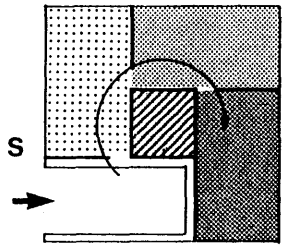


3. Site zones:
Adjacencies.

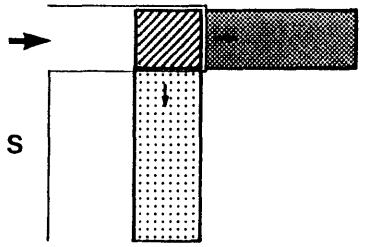
within zones of the house and transitions between individual spaces, and at the level of the room, public/ private transitions are based on use of space and the arrangement of objects within. When taken as a whole, they are seen as a way to reconcile individual and collective environments in a situation where no singular response is possible. The intent is that these spatial relationships will provide a lasting structure for the suburbs, while allowing for the specific aspects of the dwelling which are responsible for creating a flexibility and multiplicity.

A second reason for emphasizing only the notion of spatial relationships is that no set style or manner of construction is implied. While many of the examples from which these significant relationships are derived are structures based in traditional timber-frame construction, walls, furniture, glass, moveable partitions, and other pieces can serve to make distinctions between realms, and create privacy. A structure, for example, such as the Glass House by Philip Johnson can exhibit attributes of these zoning diagrams as readily as a masonry Prairie House by Wright.

4. Possible spatial configurations for the suburban house based on the transition from the public street edge to a private yard area of structure.

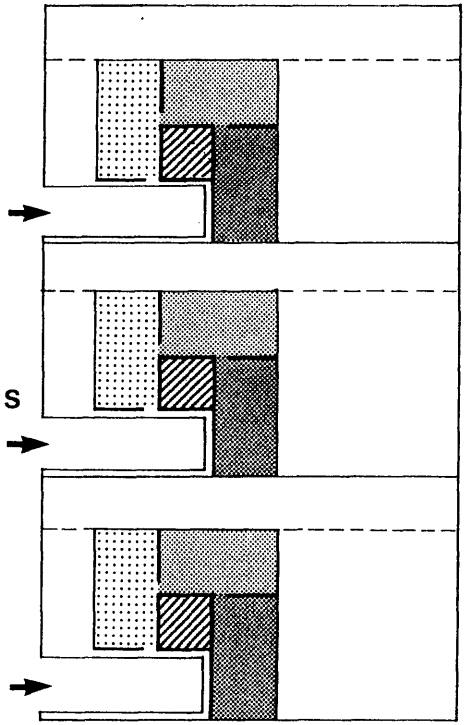


a. Privacy Around Core

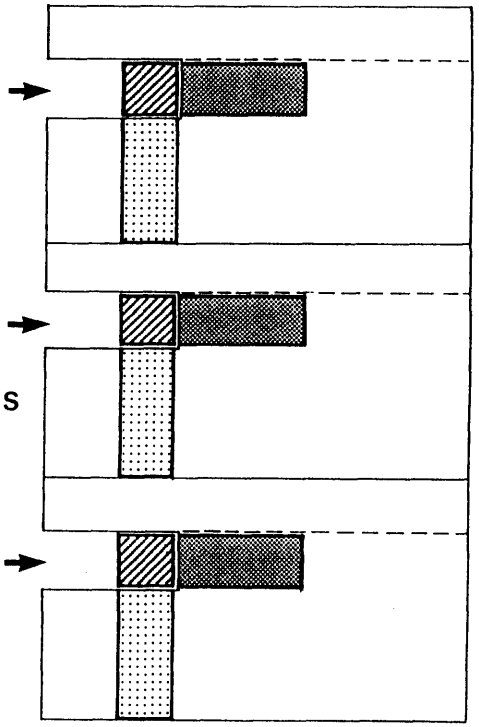


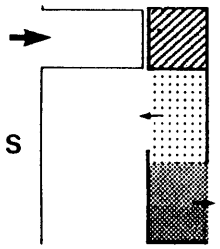
b. Privacy Off Core

Lot Configuration



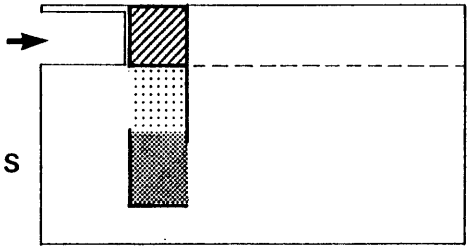
Lot Configuration

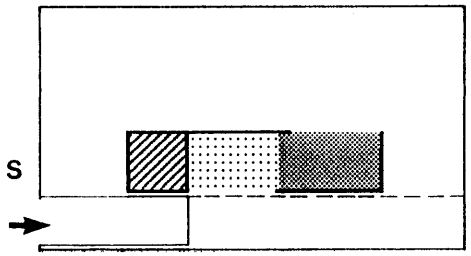


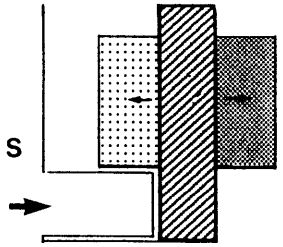


c. Privacy Away From Core

Lot Configuration

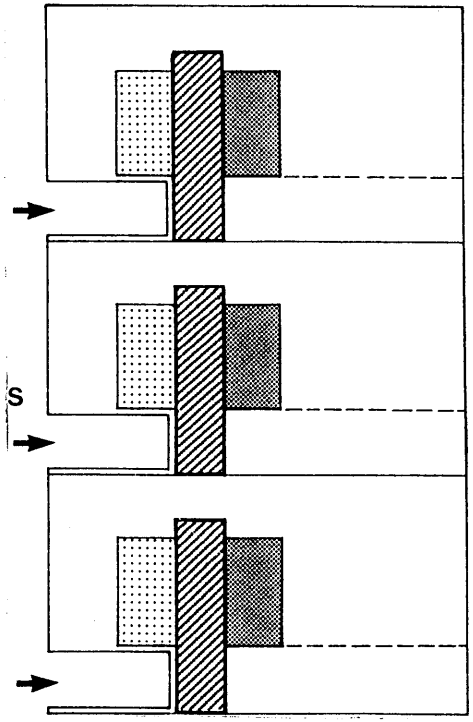






d. Privacy Through Core

Lot Configuration

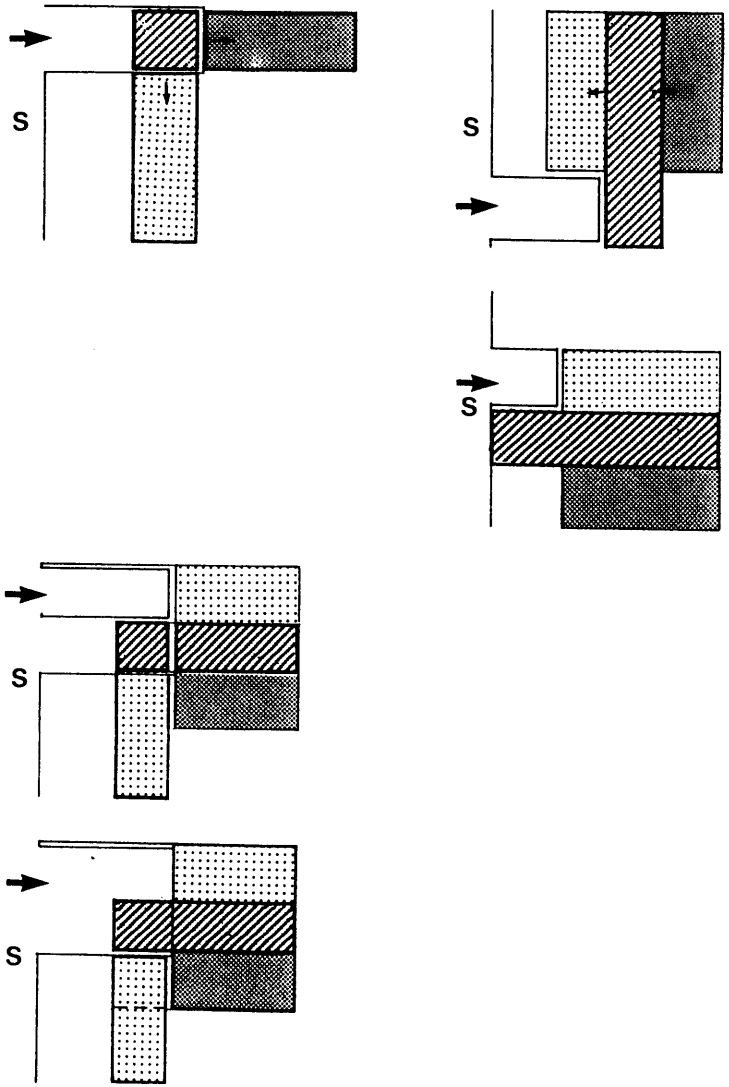


A New Structure

The Site Within the four levels of the structure of public/private realms, the Site diagrams establish a general set of relationships based on the existing structure of suburbs as currently built. It is possible that improvements to the larger scale conception of the place will occur, perhaps taking on characteristics of places such as Radburn. The intent here, though, is to provide a framework that can both establish a clearer suburban structure, as well as be used as a means to infill within existing environments of detached houses. Thus, the lot size chosen for these and subsequent diagrams are based on the proportions of the original Levittown plots (60 feet x 100 feet) allowing for both possible applications. At this level, the framework presented also recognizes definitions of public and private realms as based on an urban model. It acknowledges the street side as a typically public zone, as well as the desire for the existence of a private outdoor space. (Fig. 2.) Also denoted by these diagrams is a zone of adjacency between neighboring properties. (Fig.3.)

In the design process components of the home with a direct relationship to the context of the community must be very carefully considered. For example, the street elevation of the house as a point of communication with the neighborhood are significant to the perception of the individual's place within the

5. Combination of Privacy Off Core and Privacy Through Core diagrams.



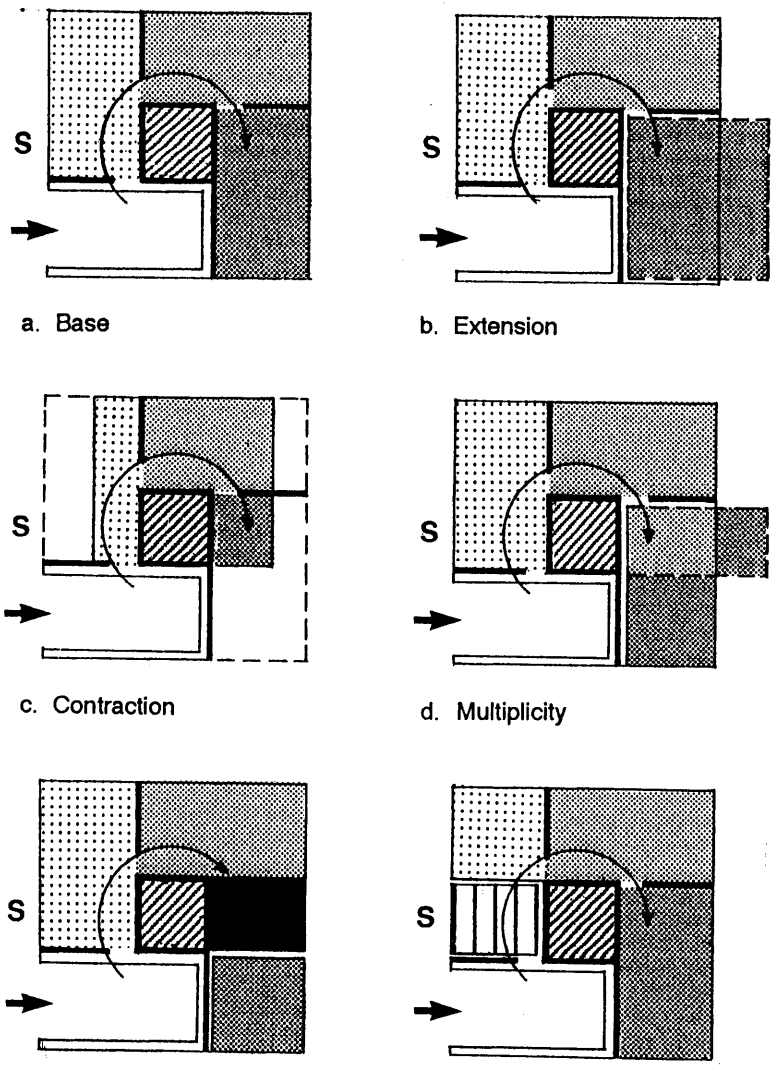
social structure of the suburb. Pieces such as the street elevation not only indicate the character of the occupants in subtle ways, but also serve to provide a sense of security -- that people are present behind -- for those on the street. The relationship of automobile and entry point(s) is also worthy of design consideration as the front door has become obsolete given the prevalence of automobile use in the suburbs. More specific architectural solutions must be sought, then, to reconcile the physical and functional manifestations of connections to the community with distinctions between individual and collective realms.

The House At the level of the house, four basic zoning configurations of public and private space within the home were chosen for their clarity of definition of these realms, as well as for the flexibility they provide in accommodating the variant needs and family structures that prevail. The basic organizations are distinguished by the way in which the transition between realms is created; from a public zone via a relationship to a core piece, to a zone of greater privacy. These diagrams should not be seen as definitive case studies, but as possible organizations of interior space. (Fig. 4.)

As seen through the diagrams in the previous chapter, several variations exist for this core piece as a distinction

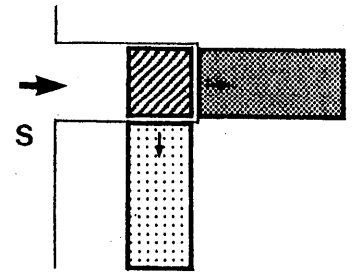
between privacies of places. As an initial point of departure, the core might be composed of basic elements such as entry and garage, service, kitchen, secondary spaces, storage, stairs and circulation. Privacy is distinguished in the first case by movement through space as the occupant passes around a core zone; hence Privacy Around Core is the first category. In the second instance, the privatization of space is determined by a separation of zones which happens in relation to the core as a central point -- Privacy Off Core. In a linear sense of space, increased distance from a point of entry can enhance seclusion, creating the third zoning condition: Privacy Away From Core. The last diagram represents a situation in which the transition from public to private realms is made by a passage through a core zone or set of spaces, providing the notion of Privacy Through Core. By basing the zone distinction in relation to the core piece, the spatial structure of the house is simultaneously able to reinforce the ritual aspects of the place of the house.

As an additional strategy, the house diagrams might be use in combination with each other, provided the basic distinctions of public and private territories are maintained. For instance, a combination of Privacy Off Core and Privacy Through Core is conceivable, allowing for a re-orientation of site and a more finely grained distinction of zoning in the private realm of the house. (Fig. 5.)

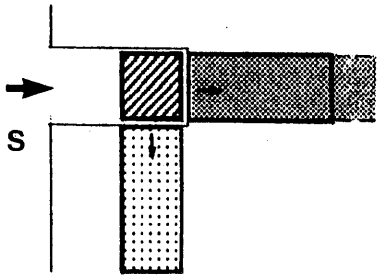


a. Base
b. Extension
c. Contraction
d. Multiplicity
e. Autonomy
f. Community

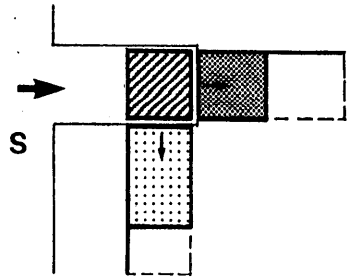
6. Reconfigurations: Privacy Around Core.



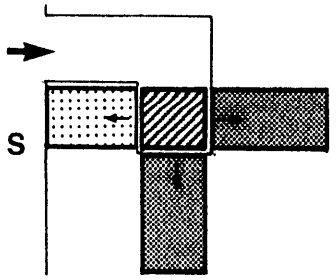
a. Base



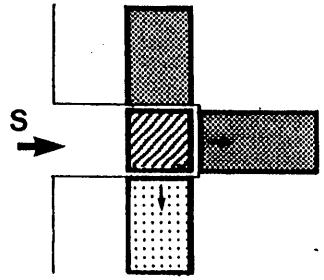
b. Extension



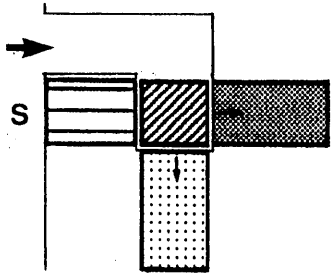
c. Contraction



d. Multiplicity



e. Autonomy



f. Community

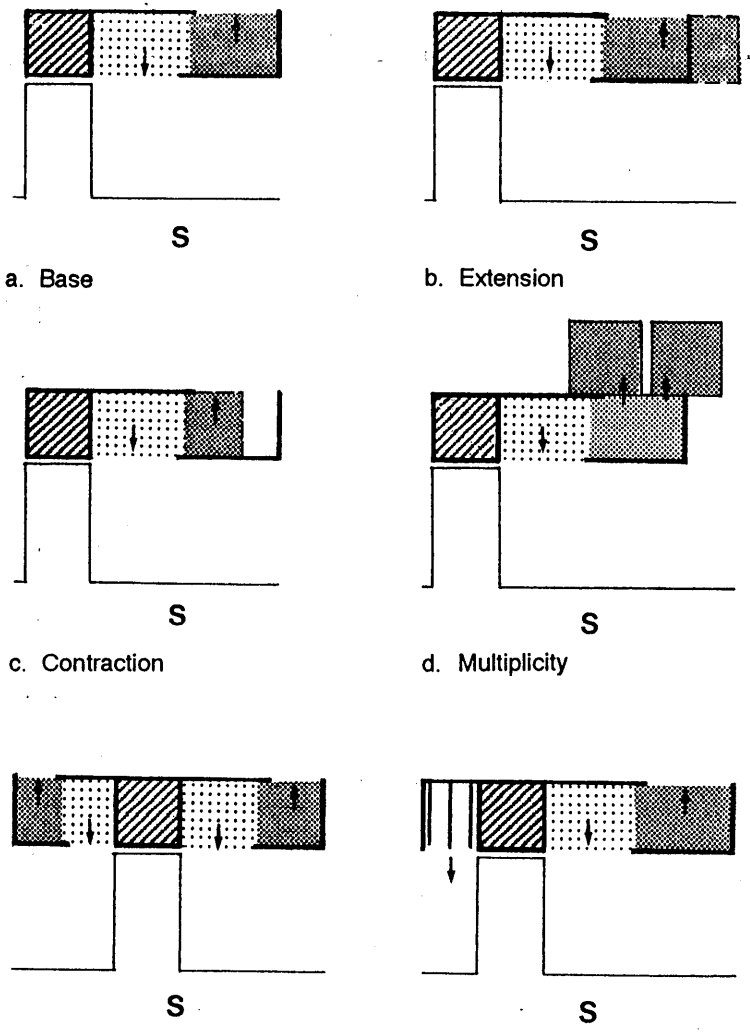
7. Reconfigurations: Privacy Off Core.

The primary means of flexibility of this level of diagrams, however, comes through an ability to express various possible family structures and life-styles, while still emphasizing intrinsic public and private definitions. Qualities that the diagrams are able to exhibit -- such as extension, contraction, multiplicity, autonomy, and community -- provide a means of expressing the necessary reconfigurations of relationships between individual and collective zones necessary for dwelling. As a whole, these qualities allow the diagrams to maintain a level of flexibility that can allow for multiple variations of living groups which include, but are not limited to: single-parent, elderly-addition, two-earner households, combined households, and space for autonomous older children and tenants. (Figs. 6 -9.)

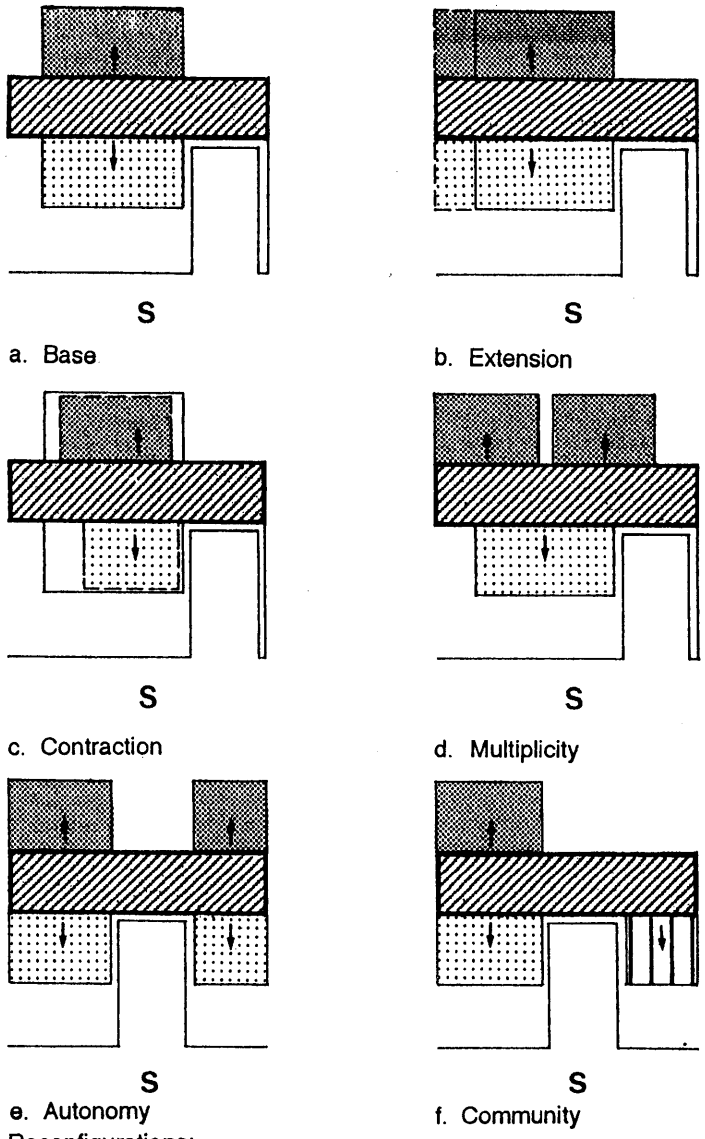
The base diagram in each case represents what might satisfy the 25 percent of the population that continues to exist in the manner of the postwar family. As the spatial structure of the Usonian House was able to grow along with the needs of the family within it, the extension diagrams likewise allow for increasing numbers of family members. In the opposite sense, the contraction category recognizes that initially, some families may be small in size and composition. Multiplicity, as the term suggests, is the quality meant for accommodating several distinct family groups within the same household. Here, each family unit is treated as having a distinct realm within the private sector of the

home. Autonomy, while similar to multiplicity in that it must provide for the existence of additional family units, also takes into account the possible desire for groups such as the elderly, adult children, and tenants to at times operate as independent individuals, while still feeling part of the house. Additional spaces, such as the telecommuter's office in the house, that must rely upon interaction with the outside world, be it through visitors or simply by means of electronic communication, are given venue through the quality termed as community. This space allows the place of work -- the office -- to be incorporated as an independent portion of publicly associated space into the house diagram.

The flexible nature of the house level diagrams, through qualities such as these, is able to reflect, not only variant family situations, but also shifts in the intensities with which various spaces are used. The conscious addition of space for what may or may not be entirely new uses, such as places to conduct business in the house, or child-care care improvements are also accounted by manipulating the basic diagram. Contraction, expansion and multiplicity can accommodate physical alterations due to changes in social use, such as decreased leisure time, which, for instance, precipitate modifications such as smaller kitchens, a preference for informal family space to formal living



8. Reconfigurations:
Privacy Away From Core.



a. Base
b. Extension
c. Contraction
d. Multiplicity
e. Autonomy
f. Community

9. Reconfigurations: Privacy Through Core.

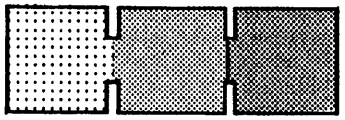
rooms, and places for the incorporation of current and future technologies.

The Zone At the level of interior zones of the house, several spatial organizations assist in providing the mechanisms for transitions from one realm to another, and thereby create a finer grain of privacy within the spaces of the house itself. In a situation characterized by the frequency of multiple family units, related and unrelated, subtle distinctions among the interior spaces of the house can aid in creating a sense of home, of individual territory for all occupants. Diagrams at this level also operate in instances where functions such as office work and child-care must be incorporated as units that may be segregated from the basic portion of the house at certain points of the day. The creation of spatial demarcations within the established house territories can be done in several distinct physical ways. First, suites of rooms, organized linearly or as clusters of rooms around a common semi-public, or semi-private, space can provide a sense of retreat for smaller groups in a large household, or can serve as family spaces where children can easily study in an informal family situation. (Fig. 10.) Just as the core piece acted as a point of transition at a larger scale, so too can such aspects of the house as service zones act as transitions between rooms at a level of greater differentiation. Elements

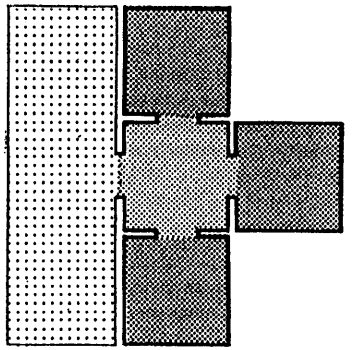
such as closets, furniture, appliances can serve as regions which create boundaries between rooms. (Fig. 11.) Similarly, what are designated as ancillary spaces, or a sequence of smaller spaces which serve as an alternative, or more private path between places, can also serve as a means of distinguishing degrees of greater privacy within a zone of the home. (Fig. 12.) Lastly, even elements of circulation between other portions of the house can act division between realms which operates as negative space, and increases privacy in their gradation of space. (Fig. 13.)

The Room As the most basic unit of the house, the room is the final point at which the distinction between public and private realms can be observed. As the haven of the individual, the nature of this space is able to reflect the most personal attitude toward the creation of a home within the house itself through subtle distinctions such as the placement of furniture, and the relationship between such elements as entry point and personal space. (Fig. 14.) With the reconciliation of public and private zones is carried out at this level by the occupant, the zoning of the house is complete and a sense of home can take hold.

10. Mechanism for transitions: Suite of spaces

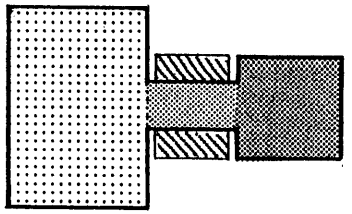


a. linear.

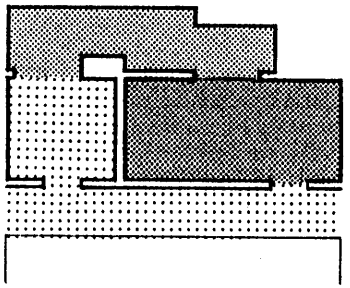


b. cluster

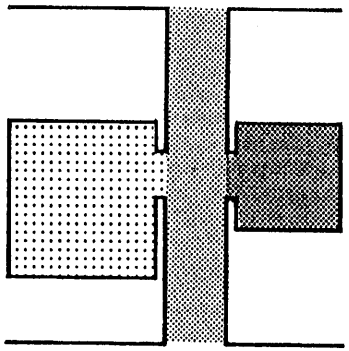
11. Mechanism for transitions: Service zone.



12. Mechanism for transitions: Ancillary spaces.



13. Mechanism for transitions: Circulation.



Implementation of the Structure

The proposed implementation process for this series of diagrams is meant to be flexible enough to suit the specific situation to which it is being applied in terms of family structure and use of space within the home. While they are seen as a gradation of zones from the scale of the neighborhood, to that of the individual room, combinations of organizations may occur both within and between levels. As previously discussed, for instance, the house diagram showing Privacy Off Core can be combined with an example of Privacy Through Core, creating a more specific sense of interior territory.

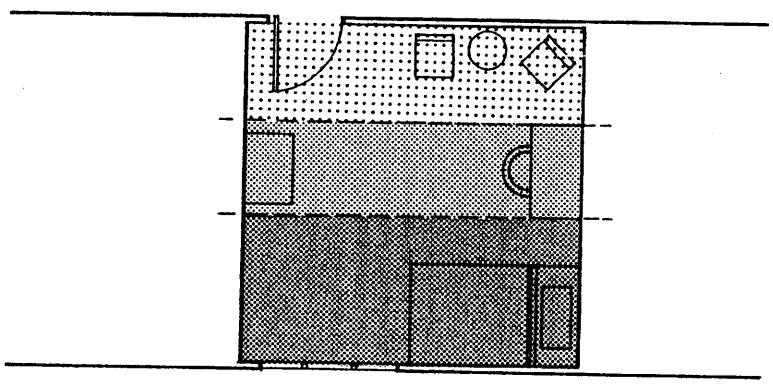
The process for implementing the diagrams can be seen by taking an example such as the combination of diagrams for a house where privacy is zoned through the core to which a cluster of rooms is added in the private realm to accommodate a second family in the house, with a common area near sleeping rooms. What is private in the house diagram is taken as the public portion of the zone diagram, in this case a cluster, and the resulting space is one of a semi-private area with private rooms opening onto it. (Fig. 15.) Through these means, such variations in spaces needed can be acknowledged in both the public and the private portions of the home, and at all levels of spatial distinction.

As an initial house design implementing this re-definition of the house, a sample configuration has been examined as a

test of the ideograms for the new spatial structure of the house. The diagrams have been distilled from notions about what qualities this place must assume. It is meant to be seen not as a single solution to be propagated, but as an exploration of the flexibility of the diagrams which seek to sponsor new and variant spatial arrangements within a definition of public and private realms.

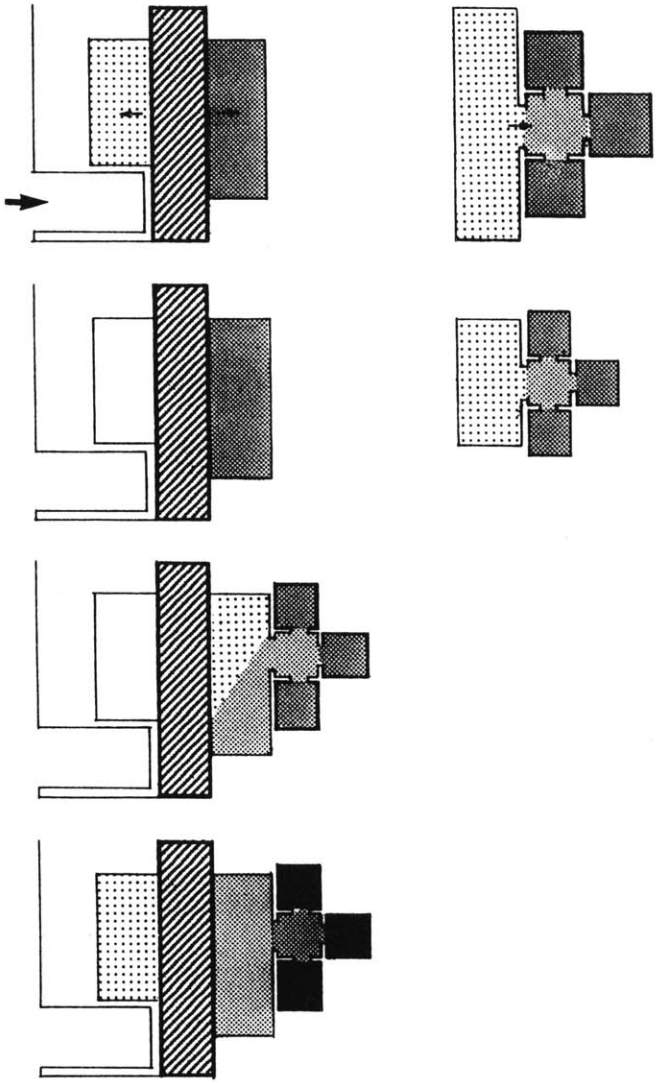
The case chosen for the design study is a situation in which two single-parents -- perhaps sisters, each with two young children - desire to share a household. Added to the basic spatial necessities is a place for an office for one of the two adults who is able to work at home four days a week. Again, the site used is completely fictitious, but is proportionate in size to that of the Levittown model. Appendix D provides representation of this exploration, which seeks to create a home for this group based on the spatial relationships and public/private structure previously defined by this study.

While the drawings indicate a possible spatial structure for the house, a more thorough examination of the form and massing of this structure is needed in order to determine a character or image that is indicative of a multi-family dwelling, yet also able to adhere to factors of cost and construction. The spatial diagrams and initial design exploration serves as a starting point for future design. Issues of construction materials and



14. Room zoning:
The realm of the individual.

15. Application of zoning reconfigurations.



techniques, implementation of a new site organization and neighborhood structure must also be addressed. As the configuration of the place has now been transformed, so too must the image of house begin to shift from that of a uniform, inflexible unit to one displaying the notion of an aggregate of forms to reflect the multiplicity of the social composition possible for the suburban environment, if it is to reflect the ideal of equal housing for a diverse population.

From House To Home

The spatial relationships that the series of diagrams presented here espouse are intended to provide a lasting structure for the suburbs, while allowing for alterations in the specific aspects of the dwelling that will inevitably change with the passage of time, as the social constructs surrounding the occupation of the place alter.

Not only does this focus on spatial definitions in the house allow for a formal rethinking of the place that can accommodate the multiplicity of life-styles present today, but also provides a structure that is receptive to future needs for diversity. Since no singular type of family or use pattern exists, concentration on diagrams as an operative means prevents focusing on the idea of a type as the model of the house for all.

By employing the spatial characteristics and overlaying future needs, family structures, and use patterns, an alternative series of diagrams can be configured which create new spatial structures. For the present, though, issues such as construction, policy, and cost are an integral part of the process of implementing this new spatial structure and must be discussed in order to create a physical place for the house defined by the diagrams presented here. Only then can the suburban house become a home for all.

Illustration Sources

Title Page

Cover .

Mickey Pallas, "Family and Buick Convertible- 1959," Photofind Gallery, New York. Reprinted by Fotofolio, New York.

Chapter 1

Cover.

J. R. Eyerman, "Moving Day Los Angeles- 1953," for LIFE Magazine, Time Warner Inc. (Boston: Graphic de France, 19--).

Chapter 2

Cover.

L. C. Andrew Inc., "Designed for your comfortable living in New England," Werdna Homes Division, South Windham, Maine [19- -].

1. Photograhs by Peter Blake in Lois Craig, "Suburbia," Design Quarterly 132, (Cambridge, MA: MIT Press, 1986), p. 8.

3.- 6. Base plans: L. C. Andrew, Inc., "Designed for your comfortable living in New England," Werdna Homes Division, South Windham, Maine [19- -].

8.- 11. Base plans, images: L.C. Andrew, Co.

12. W. Wurster and T. Bernardi, "Perspective for Case Study House #3, West Los Angeles, 1945-49" in D. Hayden, "Model Houses for the Millions: Architects' Dreams, Builders' Boasts, Residents' Dilemnas," E. Smith, ed. Blueprints for Modern Living. History and Legacy of the Case Study Houses, (Cambridge, MA: MIT Press, 1989), p. 205.

13.- 16. Base plans: L.C. Andrew, Co.

Chapter 3

Cover.

Charles Miller, "Rolling Home, Rockaway Beach New York- 1933," Ripley Entertainment Inc., 1991. Reprinted by Fotofolio, New York.

Chapter 4

Cover.

Herbert L. Smith, Jr., ed., 25 Years of Record Houses, (New York: McGraw Hill Book Co.), p. 209

2. Base plan of Rosenbaum House: John Sergeant, Frank Lloyd Wright's Usonian Houses: The Case for Organic Architecture, (New York: Watson-Guptill Publications, 1976), p. 43.

3. Base plan for Radburn, NJ: Clarence S. Stein, Toward New Towns for America, (Cambridge, Massachusetts: MIT Press, 1966), p. 56.

6. Pew House: Sergeant, p. 69.

7. "Expandable House- 1957:" Peter Arnell and Ted Bickford, eds., James Stirling, Buildings and Projects, James Stirling, Michael Wilford Associates, (London: The Architectural Press, 1984), p. 60.

8. Diagram: Mitsuo Inoue, Space in Japanese Architecture, (Tokyo: John Weatherhill, Inc., 1985), p. 109.

10. Base plan of Hotel Crozat and D'Evreux: Michael Dennis, Court and Garden: From the French Hotel to the City of Modern Architecture, (Cambridge, MA: MIT Press, 1986), p. 92.

11. Lawrence Grow, Classic Old House Plans: Three Centuries of American Domestic Architecture, (Pittstown, New Jersey: The Main Street Press, 1984), p. 77.

12. Grow, pp. 69-70.

13. Radburn house plans: Stein, pp. 54, 56.

14. Rosenbaum House: Sergeant, p. 43.

15. Base plan from Paul Goeldner, Bicknell's Village Builder : A Victorian Architectural Guidebook (Watkins Glen, New York: The American Life Foundation, 1976), Plates 10, 11.

16. Base plan: Gouldner, Plate 24.

17. Low House: Richard Guy Wilson, McKim, Mead and White, Architects, (New York: Rizzoli, 1983), p.119.

18. Grow, p. 85.

19. Grow, p. 83.

20. Pew House: Sergeant, p. 69.

21. Rosenbaum House: Sergeant, p. 43.

22. Rosenbaum House: Sergeant, p. 43.

23. Expandable House: Stirling, p.60.

24. Low House: Wilson, p. 119.

25. Inoue, p. 124.

Chapter 5

Cover.
"Sunrise Golf Village: Home of the World Famous . . . Upside-Down House," (San Francisco: Quantity Postcards, [19--]).

4. Original plans taken from:
Expandable House: Peter Arnell, James Stirling: Buildings and Projects, (London: The Architectural Press,1984), p. 60.

Rosenbaum House: John Sergeant, Frank Lloyd Wright's Usonian Houses: The Case for Organic Architecture, (New York: Watson-Guptill Publications, 1976), p. 43.

Pew House: Sergeant, p. 69.

Victorian homes: Paul Goeldner, Bicknell's Village Builder : A Victorian Architectural Guidebook, (Watkins Glen, New York: The American Life Foundation, 1976), Plate 24.

Lawrence Grow, Classic Old House Plans: Three Centuries of American Domestic Architecture, (Pittstown, New Jersey: The Main Street Press, 1984), p. 85.

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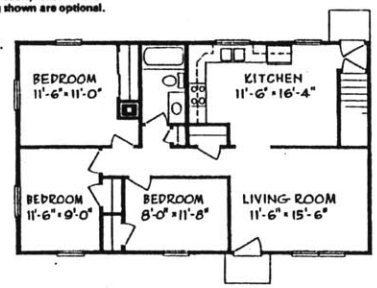
Appendix A
Suburban House Documentation

Base documentation for analysis of the suburban house is taken from an advertising booklet of the L.C. Andrew Company entitled, "Designed for your comfortable living in New England."

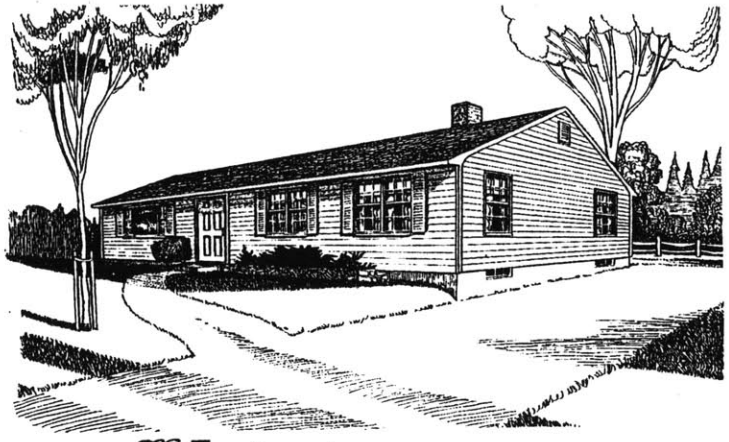
The Dirigo

Our most popular ranch type home, the Dirigo is low in cost making it ideal for newlyweds or retired folks with grandchildren who come to visit. There are 3 bedrooms, living room, dining/kitchen combination, bath and 5 closets. Carport and clapboard siding shown are optional.

FLOOR PLAN 24'x40'—960 SQ. FT.



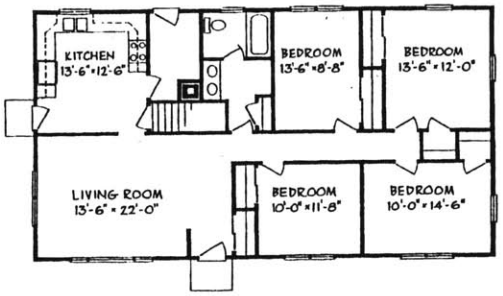
L.C. ANDREW INC.
Werdna Homes



The Eastport

A large or growing family will appreciate this house with its mud room, laundry and 4 bedrooms all on one floor. Large closets and storage problems. The living room with its picture window is an ideal center for family activities as well as a place to entertain. The clapboard siding shown is optional.

FLOOR PLAN 28'x52'—1456 SQ. FT.



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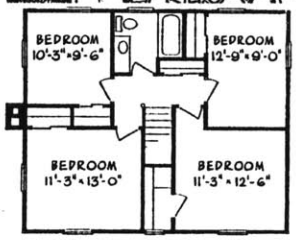
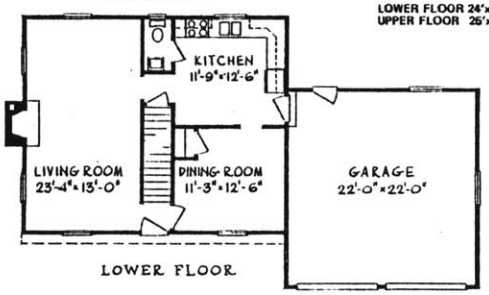
Werdna Homes



UPPER FLOOR



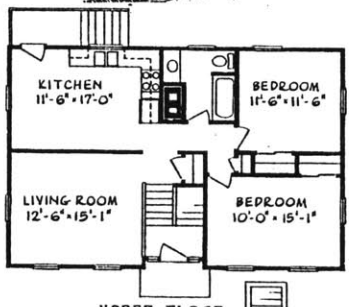
LOWER FLOOR

The Somerset

An attractive garrison with a delightfully colonial entrance that opens into a spacious living room with fireplace. The kitchen, with double casement windows over the sink, is a cheerful, convenient place to work. There's a half bath on the first floor, full bath and 4 bedrooms on the second. If you prefer, you can have an extra large master bedroom and 2 smaller ones. The optional siding shown is board and batten on the front and clapboards on the rest.

LOWER FLOOR 24'x30'—720 SQ. FT.
UPPER FLOOR 25'x30'—750 SQ. FT.

L. C. ANDREW INC
Werdna Homes



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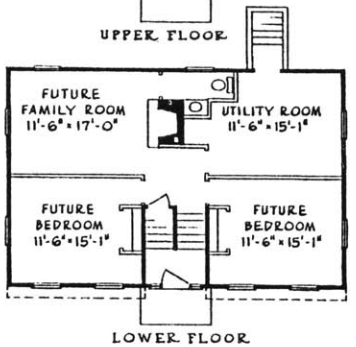


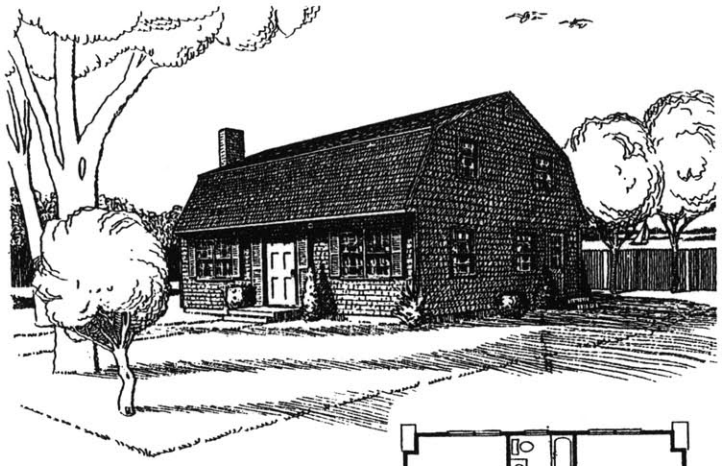
LOWER FLOOR

The Knox

A modern split foyer that's economical to build. Especially designed for future expansion as well as immediate family living. There's an attractive entrance, 2 bedrooms, country kitchen, living room and bath. Future: game room and 2 bedrooms in lower level. The clapboard siding shown is optional.

LOWER FLOOR 24'x38'—912 SQ. FT.
UPPER FLOOR 25'x38'—950 SQ. FT.

L. C. ANDREW INC
Werdna Homes

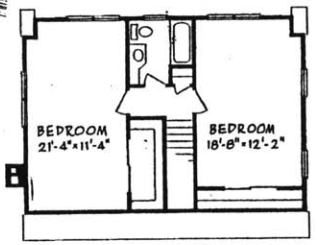


The Amsterdam

The gracious gambrel-roofed home, well-designed for family living. Large master bedroom with walk-in closet, and either one or two additional bedrooms upstairs. Roomy kitchen, dining room and living room downstairs. Another bedroom or possible den on the first floor, also. Two full baths.

LOWER FLOOR 24'x32'—768 SQ. FT.
UPPER FLOOR 22'x32'—704 SQ. FT.

L. C. ANDREW INC
Werdna Homes



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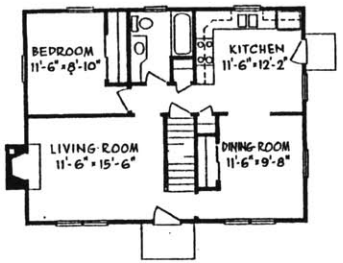

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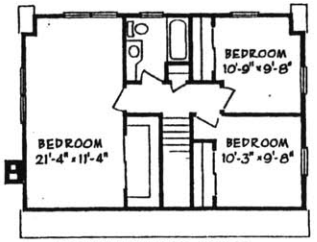


ALTERNATE UPPER FLOOR

The Amsterdam

Items available at customer's option*

Siding:	Primed hardboard lap siding, 8" or 5" exposure Wood clapboards, natural finish, 4" or 6" exposure Red cedar shingles, natural finish, 8" or 14" exposure White cedar shingles, natural finish, 6" exposure Cedar shakes, hand-split, natural finish, 14" exposure Cedar shakes, factory primed or painted, 14" exposure Pine board & batten vertical siding, rough sawn, natural finish
Insulation, Floors:	3½" Reverse Flange
Insulation, Walls:	3-5/8" insulation with polyethylene vapor barrier
Insulation, Ceilings:	6" foil-faced fiber glass insulation
Flooring:	Select red oak
Other:	Kitchen cabinets, appliances, vanity, bath and lighting fixtures, finish floor materials, panelling or wallboard
Windows:	Storm panels, insulated glass and screens optional

*Not included in standard Werdna package. Available at additional cost.

The Amsterdam

Standard Werdna Manufacturing Specifications Included in Werdna Package

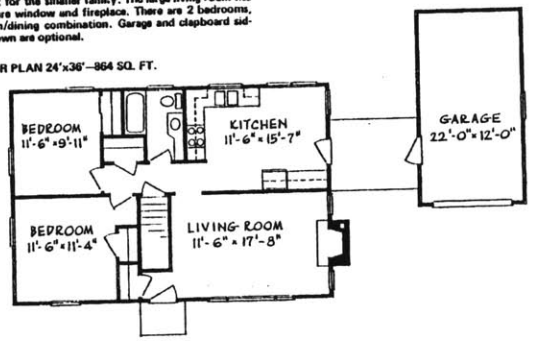
WALLS, EXTERIOR:	Constructed at Werdna Homes Division with doors and windows installed
WALLS, INTERIOR:	1st floor framed at Werdna. 2nd floor framed at job site
WALL FRAMING:	2"x4" kiln dried framing stock
OUTSIDE SHEATHING:	10" exposure primed hardboard lap siding
INSULATION, WALLS:	2½" fiber glass, applied at job site
INSULATION, CEILINGS:	3½" fiber glass, applied at job site
RAFTERS:	2"x6" spaced 16" apart
CEILING JOISTS:	2"x6", 16" apart
FLOOR JOISTS:	2"x8", centered 16" apart for 1st floor 2"x10", centered 16" apart for 2nd floor
ROOF OVERHANG:	12"
FLOORS:	In kitchen and bathroom 5/8" plywood underlayment over ½" CDX. All other areas 5/8" particleboard over ½" CDX
WINDOW BLINDS:	For front of house, as shown on plan
DOOR BLINDS:	For front door, as shown on plan
WINDOWS:	Factory primed with removable rectangular grids
INTERIOR WOODWORK:	Finish grade pine; window and door casing, baseboard and closet shelves
EXTERIOR TRIM:	All doors, windows, blinds, and trim boards are factory primed
INTERIOR DOORS:	Flush mahogany. Hardware is brass except for bathroom which is chromium
EXTERIOR DOORS:	Style shown on plans. 1-3/4" thick
ROOFING:	Standard ½" plywood sheathing. 235# asphalt self-sealing shingles

L. C. ANDREW INC
Werdna Homes
SOUTH WINDHAM, MAINE 04082

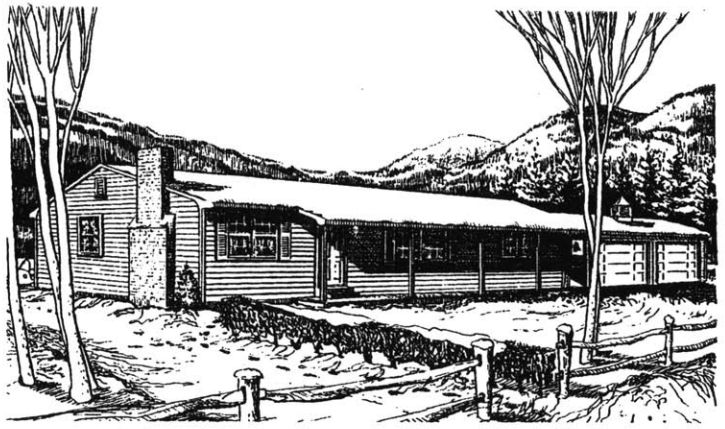
The Cumberland

Cozy comfort and convenience make the Cumberland perfect for the smaller family. The large living room has a picture window and fireplace. There are 2 bedrooms, kitchen/dining combination. Garage and clapboard siding shown are optional.

FLOOR PLAN 24'x36'—864 SQ. FT.



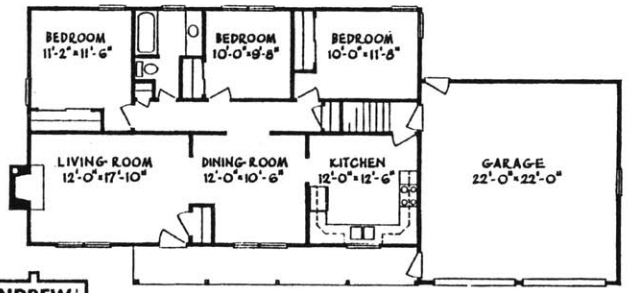
L.C. ANDREW
Werdna Homes



The Kennebec

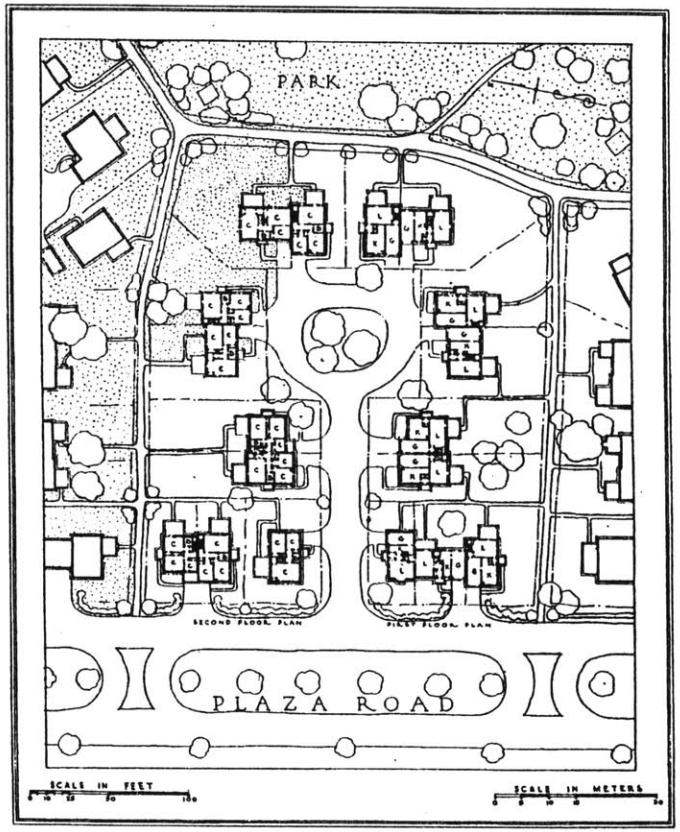
In the tradition of a ranch house, the Kennebec offers the openness that gives a feeling of spaciousness and adds to efficiency. Three large bedrooms, living room, combination family/dining room and snack space in kitchen. Terrace, garage, and clapboard siding shown are optional.

FLOOR PLAN 26' 8"x44' 8"—1192 SQ. FT.



L.C. ANDREW
Werdna Homes

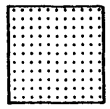
Appendix B
Site Plan for Radburn, New Jersey



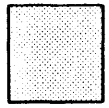
Site plan for Radburn, NJ take from Clarence S. Stein, Toward New Towns for America, (Cambridge, MA: MIT Press, 1966), p. 56.

Appendix C
Diagram Legend

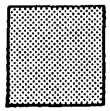
Core area: includes spaces such as storage, service rooms, kitchens, baths, etc.



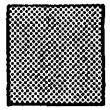
Public zone of house: includes spaces for interaction with the community, as well as collective family space.



Semi-public transition zone.



Semi-private zone: possibly includes such spaces as dining and common family areas.



Private zone: possibly includes sleeping areas, study spaces, etc.

Highly private zone: spaces for individual occupation.

Public space for daily community interaction such as office space.

S

Street.

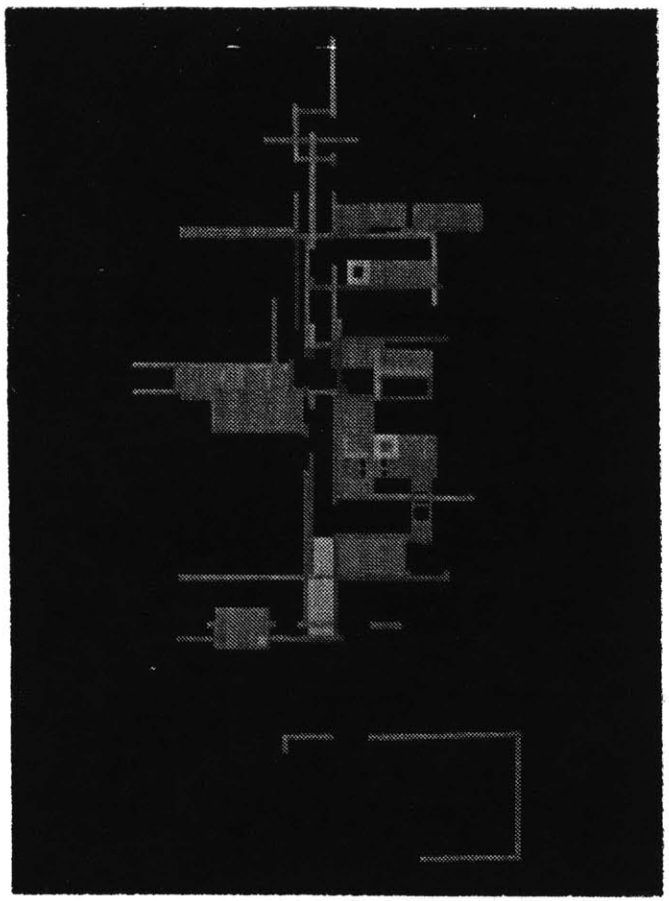
Access from street.

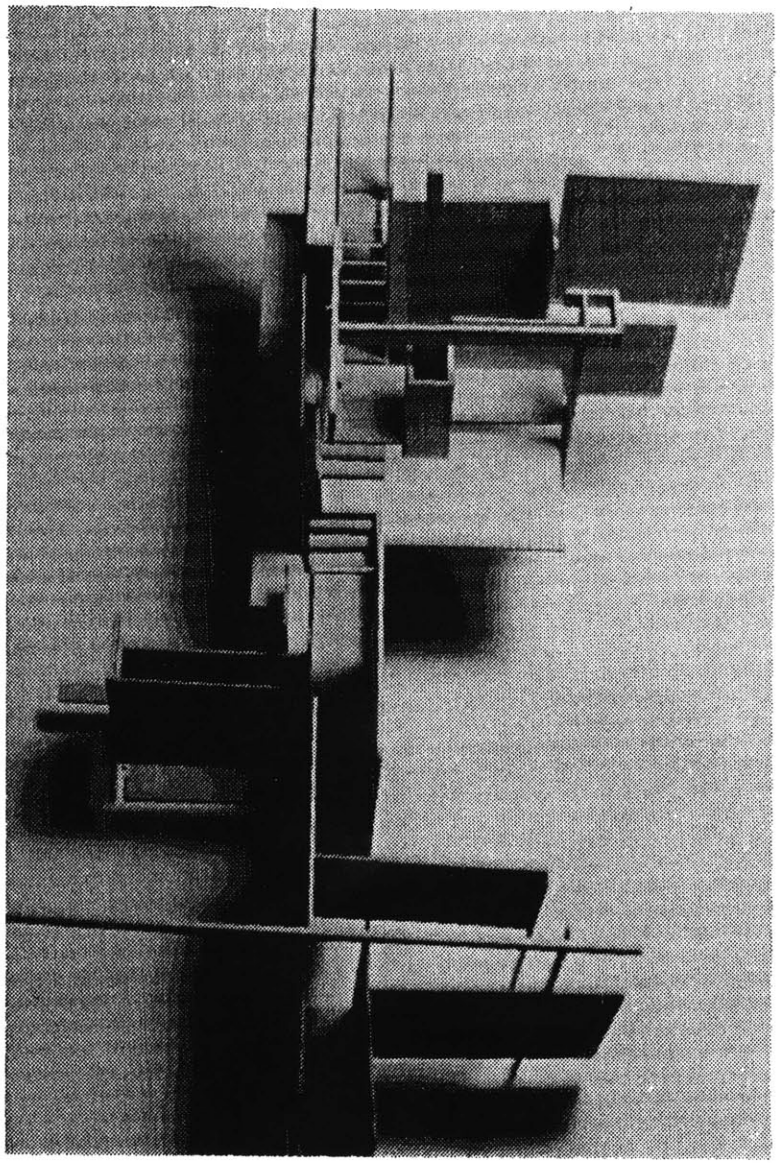
Direction of transition between public and private realms in relation to core piece.

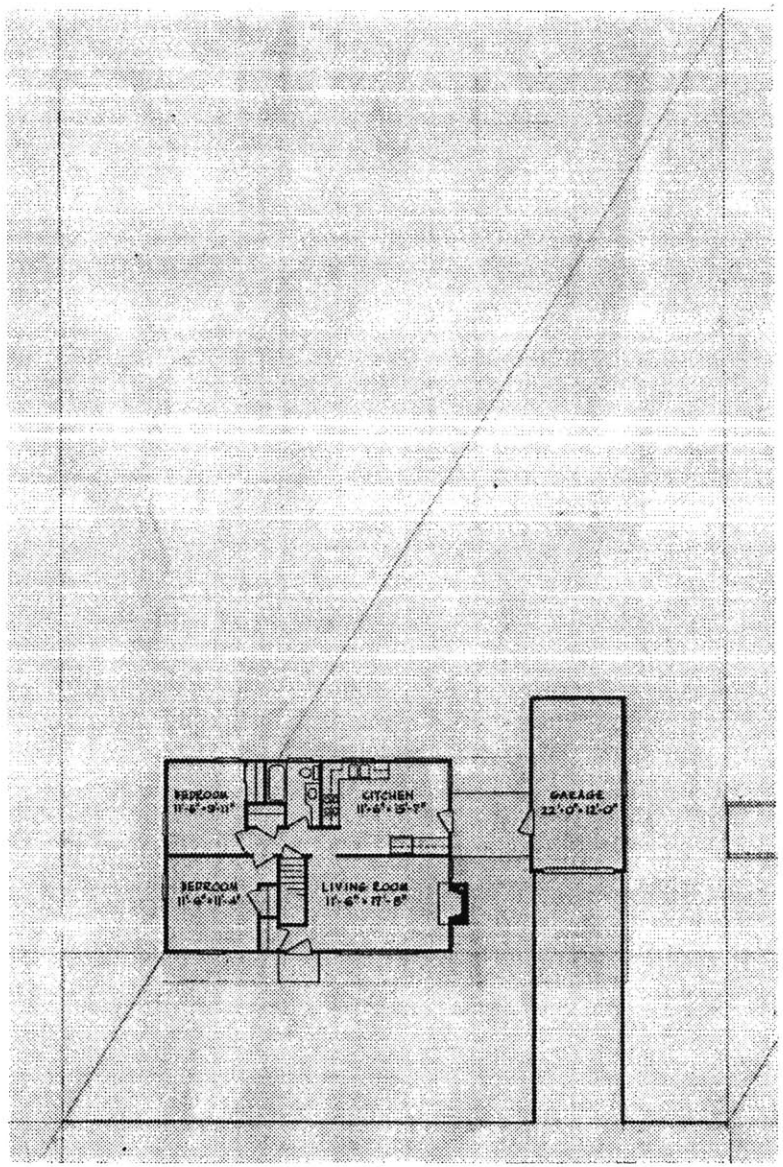
Appendix D
Design Exercise Documentation

The following process drawings are an initial part of a design project for a suburban house based on an implementation of the spatial diagrams developed in this study.

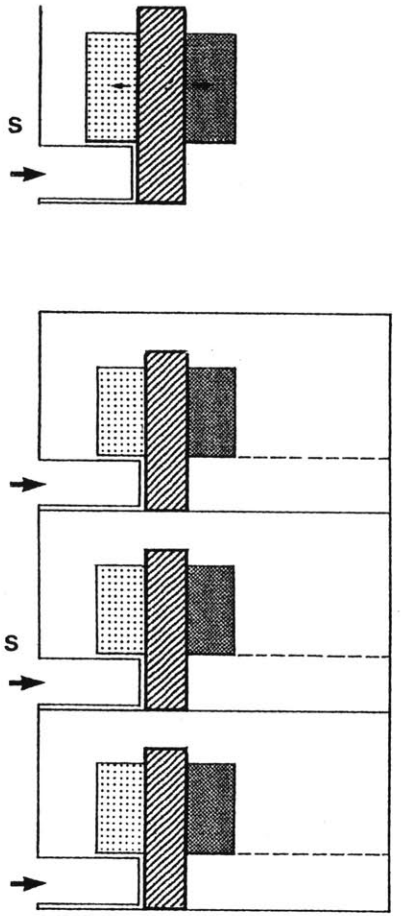
(Below) Collage of core area.
(Right) Model of core area.

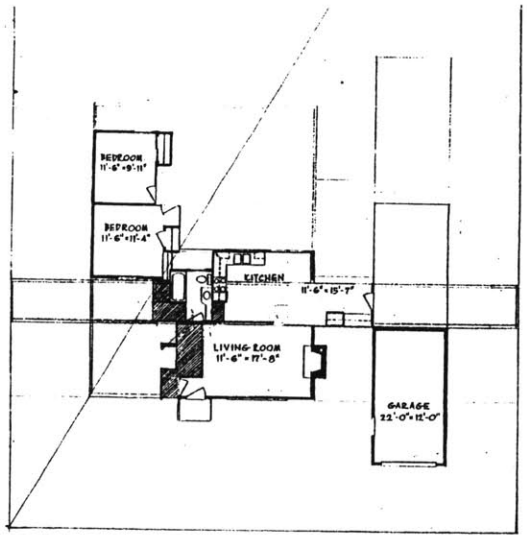


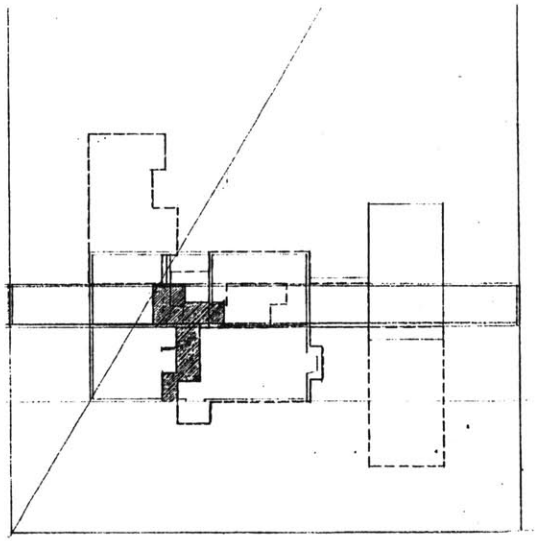


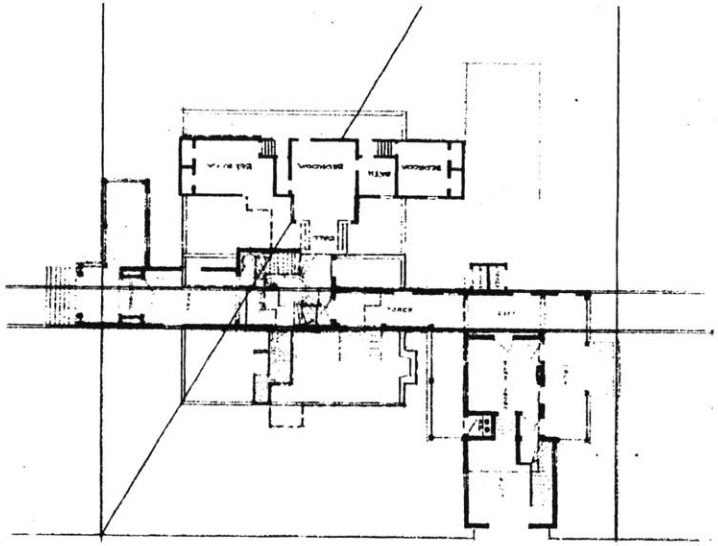


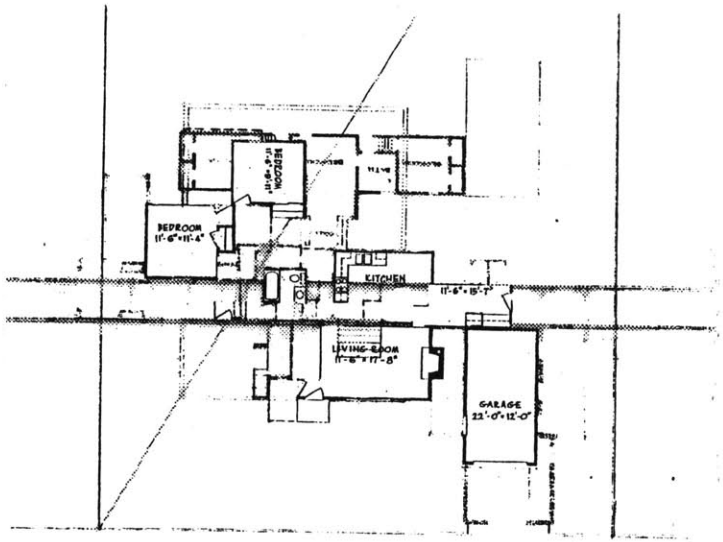
(Left) Initial one family suburban house.
(Below) Diagram implemented: Privacy Through Core.

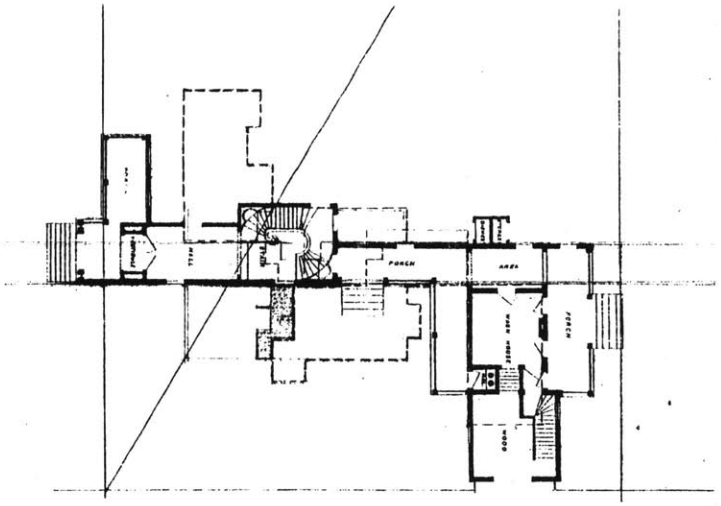


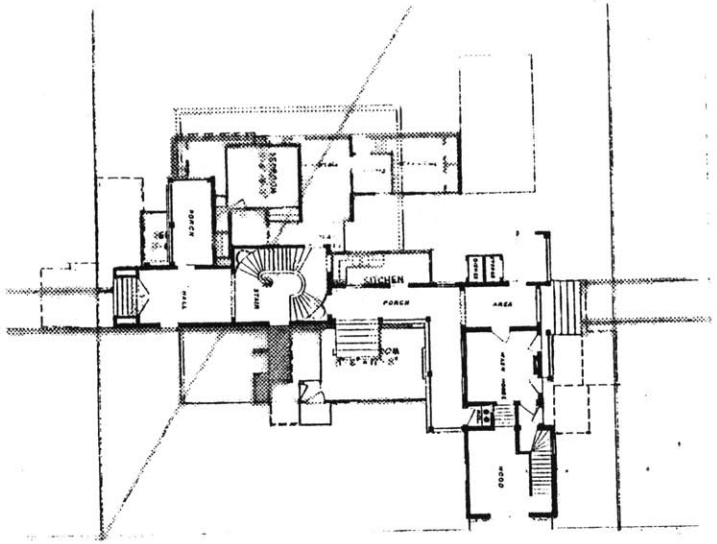

BEDROOM
11'-6" x 9'-11"
BEDROOM
11'-6" x 11'-4"
KITCHEN
11'-6" x 15'-7"
LIVING ROOM
11'-6" x 17'-8"
GARAGE
22'-0" x 12'-0"



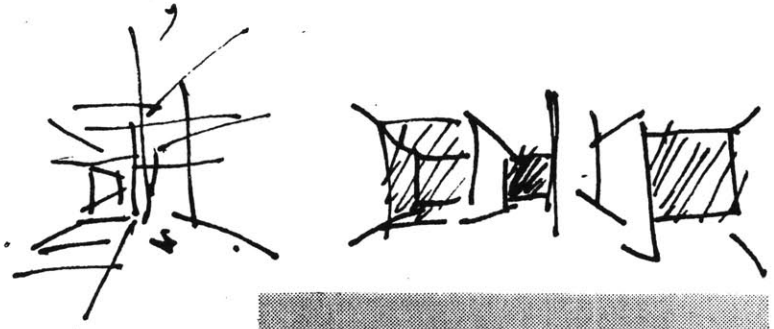


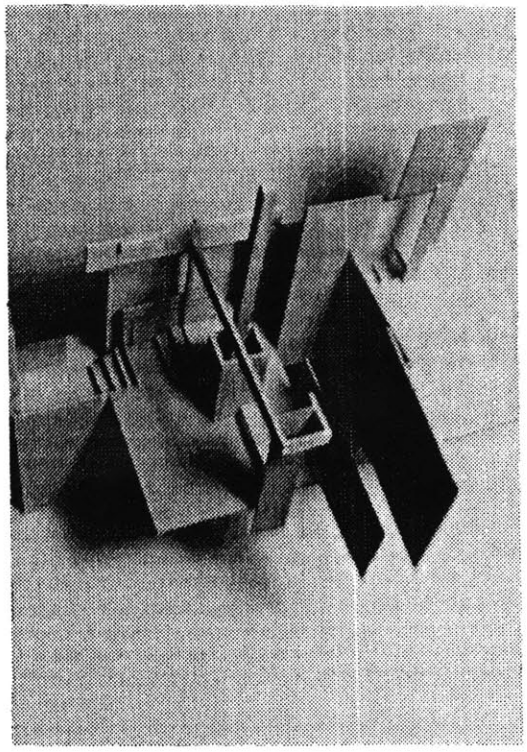

BEDROOM
11'-6" x 11'-4"
KITCHEN
11'-6" x 15'-7"
LIVING ROOM
11'-6" x 17'-8"
GARAGE
22'-0" x 12'-0"

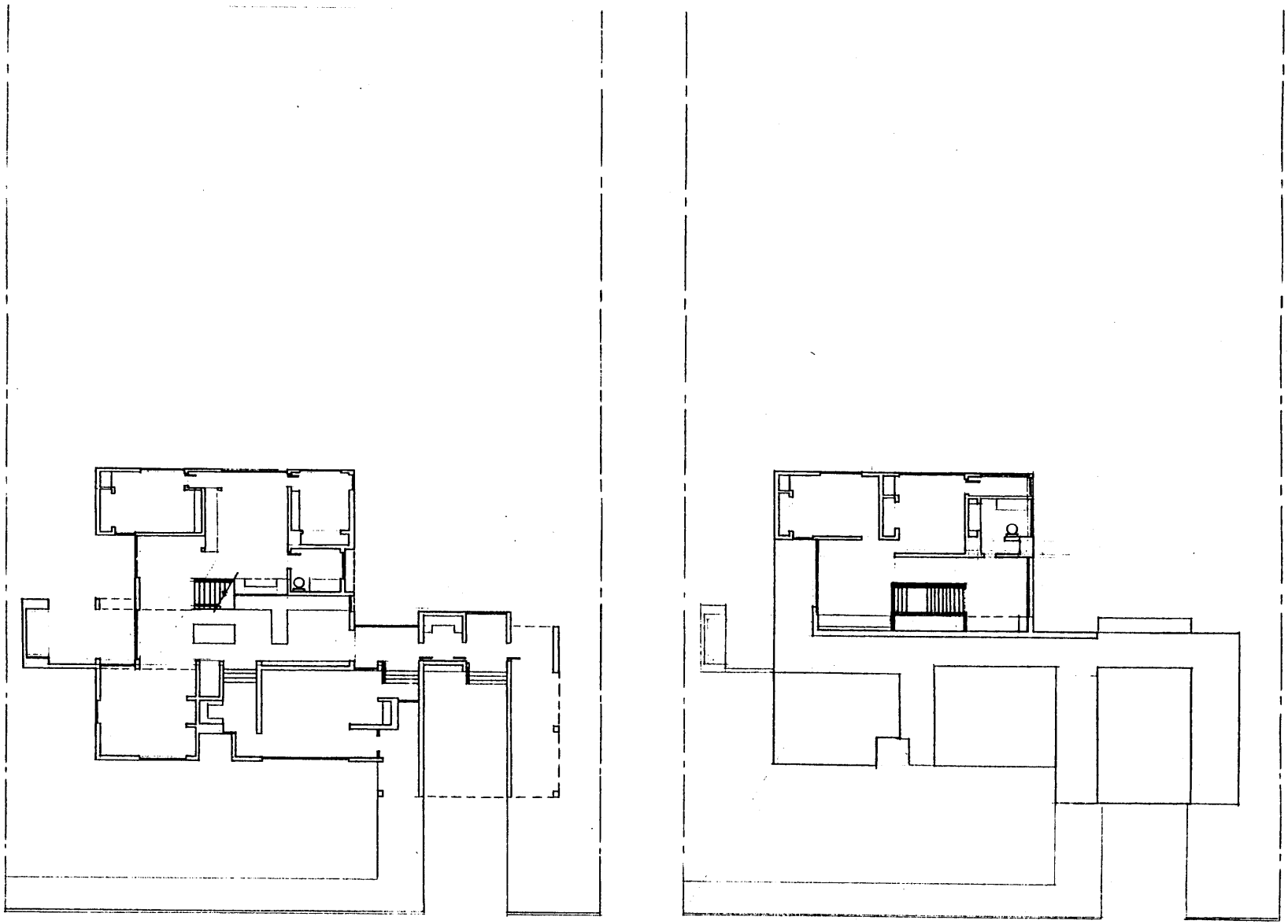


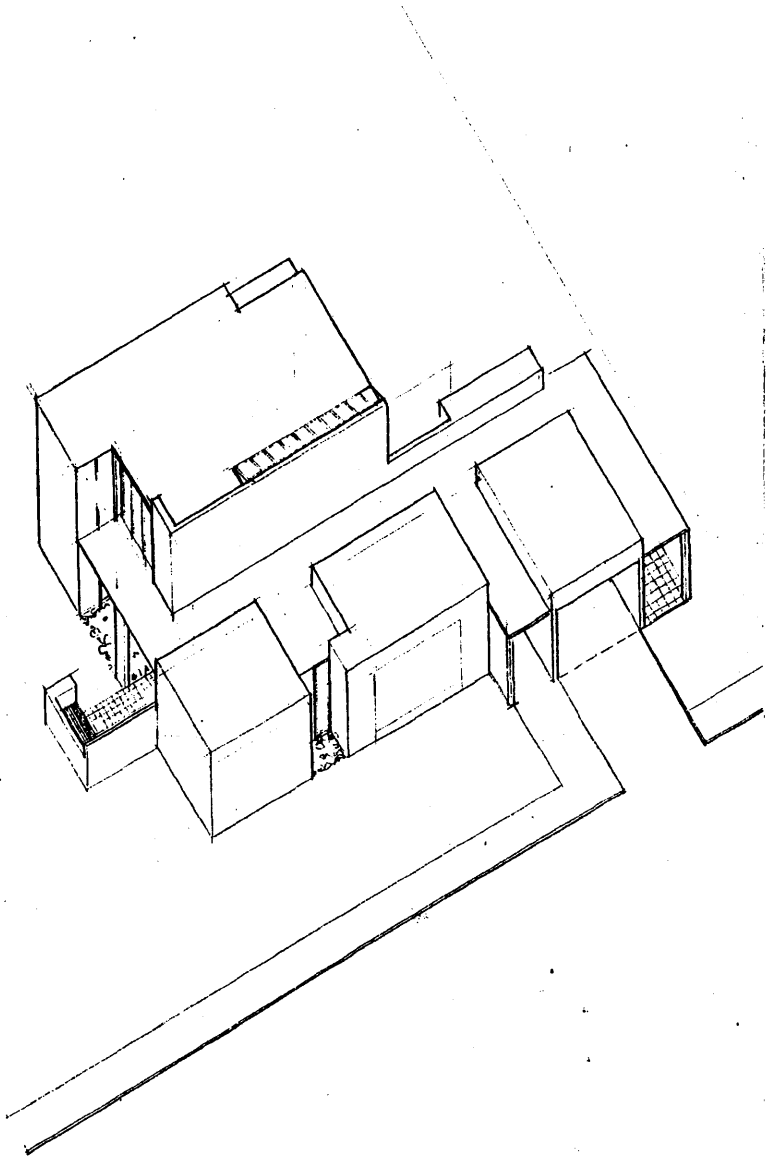


Pages 102 - 103: Transformations of diagram and spatial precedents into a house for two single-parents with one and two children each. Includes an office space in the house. (Below) Model of core.









Page 104: (Left) Study -- ground floor plan.
(Right) Study -- second floor.
Page 105: Axon of massing -- study for an image of multiplicity.